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GUEST EDITORIAL

Practicing Medical Education

FEW of us primarily occupied as medical practitioners or medical educators have not been drawn into discussions which seem to highlight the contrasts between these two vitally associated fields. One would think there is far more dividing our thinking and our actions in these two areas than uniting us in both a chronological and professional continuum.

In the medical centers of the United States over the past fifty years, the overwhelming challenge has been the changing scientific environment, reflecting the great advances of medical knowledge in this period. This has given rise to emphasis—perhaps undue—upon the exotic, the complicated, the dramatic, not merely in the accumulation of patients in medical centers but in their use in student teaching. This aspect of the problem has received widespread recognition in medical schools over the nation in the past ten years; resulting in very general use of home care programs, preceptorship plans, and the like, presenting the roles of the physician in actual practice. These are also increasingly enriched with lectures and demonstrations on the problems of opening an office, setting fees, practical medical ethics, insurance, medical-legal matters, and so on. There is still much more to be done.

But this is only one of the several aspects of an effective approach to the whole problem. As we have benefited from the introduction of some of the realities of practice into the experience of the medical student, we would do well to enrich the practice of medicine with some of the realities of medical education. It is conceivable that every physician can enjoy the practice of medical education.

Several characteristics of this experience are worthy of special note. The most important of these is the frank acknowledgment that where two or more physicians are gathered, each one knows more than any one of the others about some aspect of medical knowledge—and furthermore as physicians, we owe it to ourselves and to our patients to bring the total resources of the medical community to bear upon their problems.

Almost equally important is acknowledgment to ourselves that alertness of medical judgment is enhanced by the teaching atmosphere of frank professional discussions—and this alertness can grow dull indeed unless our daily practice is open to the view of colleagues, associates or students.

Without danger to the doctor-patient relationship, without jeopardy to the vital concept of privileged communications between the patient and his physician, the teaching atmosphere can and will develop in every medical community today, if we would begin to realize the potential of our present medical resources.

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It is in the very nature of modern medical knowledge that every one of us is an incomplete physician; and that our inadequacies may prove of vital importance to any one of the patients in our care. If the experience of medical centers has any meaning at all, it is that even the ablest of us are better physicians for the fact that our observations, our reasoning and our judgments are subject to the stimulation of our colleagues all the time.

In the last analysis we are students of medicine from the first day in Anatomy until the last day of practice.

JOHN B. TRUSLOW, M.D.

EDITOR'S NOTE. Dr. Truslow is Dean of the School of Medicine of the Medical College of Virginia.

Floral Eponym

STAUNTONIA

STAUNTON, SIR GEORGE LEONARD, 1737-1801

This English physician graduated in medicine at Montpellier in 1758. He practiced medicine in the West Indies where he held several official appointments among which was member of the legislative Council and Attorney General for Grenada. In 1782 he was sent on a commission to Calcutta, returning to England in 1784. In 1787 he was elected a fellow of the Royal Society and in 1790 was made an honorary D.C.L. at Oxford. He is buried in Westminster Abbey.

Stauntonia is a small, little-known genus of Asiatic, woody vines.

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EMERGENCY ROOM SURGERY AND THE PHYSICIAN IN GENERAL PRACTICE*

CHARLES BRUCE MORTON, II, M.D.,†
Professor, Clinical Surgery and Gynecology,
University of Virginia,
Charlottesville, Virginia

Frequently surgery has been divided into two categories, major surgery and minor surgery. The implication has been that almost any physician might do minor surgery but that only the specially trained should attempt major surgery. Theoretically, such a consideration has much to recommend it, but, unfortunately, it has never been possible to draw sharp lines of distinction between what is major and what is minor. Furthermore, it is evident that what may seem to be at first glance a minor procedure may prove to be actually a major undertaking. How many handicapped or useless fingers and hands are there because what appeared to be a minor laceration masked the presence of severed tendons or nerves? How many lives have been sacrificed to the cauterization or inadequate excision of pigmented skin lesions that appeared to be benign but were really malignant; melanomas, lesions that may be more than a match for the most radically major procedure by the most highly trained and experienced surgeon!

There are many special skills that may be developed by the physician in his fight against disease and death. Surgery is only one of them. The physician in general practice must cultivate to a degree a working knowledge of most of those skills. He will need to use some because he can and at times he must. He will need to abjure others because he realizes limitations of capacity or facilities and, for the good of the patient, refers him to another physician with the special skill or facilities required. There should be no friction between such physicians. For instance, the physician trained in the special skills of surgery can have no stronger and more dependable ally than the physician in general practice who supervises the patient after operation and guides his restoration to health and usefulness in his home environment. Nor can the physician in general practice have a stronger and more dependable ally than the surgeon to whom he may turn for advice and help when needed.

However much or little surgery the physician in general practice may wish to do, he may find himself in the position of having no alternative to doing some surgery—often under circumstances that may mean the difference between the survival and the death of the patient. I refer especially to what may be called the emergency care of the injured, and so I come to the subject upon which you so kindly invited me to address you. My previous remarks may seem to have been an unnecessary digression but I think not, because I hope they may at least have called your attention to what seem to me to be very important elements of understanding and sympathy between the physician in general practice and the physician in the practice of surgery exclusively.

Emergency surgical care of the injured entails many decisions and techniques and judgments that may be hard to catalog. Experience is the indispensable teacher and nothing that can be said or written can wholly substitute for it. Since I cannot speak from the experience of general practice, I must speak from the experience of general surgical practice—for more years than I now like to brag about. The surgeon commonly sees his urgent patients in the hospital emergency room, often provided with the latest equipment and trained personnel for resuscitation, anesthesia, medication, intravenous therapy, asepsis, antisepsis and all grades of surgical procedures. The physician in general practice may have the same facilities of course but not infrequently his emergency room is in the office or home or even by the roadside. Yet the outcome, even life itself, may depend upon what he does in the course of his first ministrations to the patient.

Probably the simplest means of discussing the problem will be to amplify certain topics, namely: free respiratory exchange, hemorrhage and shock, infection, cosmetic appearance and function.

Free Respiratory Exchange:

It goes without saying that life cannot long con-

†From the Department of Surgery, University of Virginia Medical School, Charlottesville, Virginia.

*Read before the Second Annual Scientific Assembly of the Virginia Academy of General Practice at Roanoke, May 9th.

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tinue unless respiratory exchange, the inhalation of oxygen, the exhalation of wastes takes place. Actually the physician may be too late if whoever is immediately available fails to remove mechanical impediments to respiration such as constricting clothing, crushing pressures, and foreign substances in the respiratory passages and possibly further still to commence artificial respiration. The so-called "sucking wound" of the chest must not be forgotten in considering things that may impede respiration. Prompt application of a pressure dressing will usually suffice until surgical closure can be accomplished.

When the physician arrives he should immediately make sure that free respiratory exchange can occur or else take steps to make sure that it does occur, even perform a tracheotomy if necessary. A knife alone will open the trachea and a curved hemostat will maintain patency of the opening until a tube can be procured, and so, a life may be saved.

Hemorrhage and Shock:

Among the threats to the life of the injured, however, probably the greatest are hemorrhage and shock. They are so closely related physiologically and clinically that they are practically inseparable. In a limited discussion I cannot elaborate further than to remind you that the chief factors in both are the loss of circulating blood volume with certain related abnormalities of the distribution of fluids, proteins and electrolytes in and around the tissue cells. I need hardly remind you that the first consideration involved in emergency surgical treatment, after making sure that there is no impediment to respiratory exchange, is the identification of hemorrhage and the use of measures to stop it if it exists. Much valuable time and possibly irreplaceable blood may be lost by delay incident to search for pressure points, rigging tourniquets, efforts at sepsis or antisepsis and other less urgent things. Local pressure at the site of actual bleeding is often the most effective means of controlling hemorrhage until more definitive measures can be employed. Although asepsis and antisepsis may have to defer to the urgency of stopping hemorrhage, they must not be forgotten and should be observed as scrupulously and quickly as possible. Even the homely roll of toilet tissue or the laundered handkerchief or towel, however, may pinch-hit temporarily for more conventional sterilized materials.

The general measures just referred to may be carried out at the roadside or almost anywhere and may have saved a life—though their neglect may have lost one. Having done all that can be to assure free respiratory exchange and stop blood loss, one should try to give reasonable alleviation of pain. Pain may aggravate shock, so moderate amounts of opiate may be important. Excess amounts of opiate, however, may depress respiration and induce such stupor that dangerous symptoms and signs may be masked and thus harm done. Morphine sulphate, gr. 1/4 (16 mg.) or its equivalent among the newer similar drugs may be employed with reasonable safety. If inadequate, after waiting 15 to 30 minutes for it to take effect, half the amount might be used and again a waiting period observed before giving more.

Finally, the patient must be transported carefully, preferably by ambulance, to a place where adequate facilities are available for diagnosing the seriousness of his condition and for rendering more definitive treatment. Adequate facilities may be available in a well equipped office but frequently a hospital must be sought.

In reference to the diagnosis of the seriousness of the patient's condition, it is extremely important that diagnostic measures be restricted to those which will not add to the seriousness of his condition. X-ray examinations, for instance, may, by moving a patient about, increase shock, re-establish hemorrhage, cause brain or cord damage and exert many other harmful influences. Frequently careful clinical observation will adduce equally positive information and with infinitely greater ease and less risk, not to mention expense. Fairly frequent observations of the rate and character of the pulse and respiration, the blood pressure, the condition and color of the skin, the state of consciousness and others equally simple suffice at first. Later it may be important to know about the body temperature, the blood picture, the blood volume and its chemistry and other observations that indicate improvement or deterioration.

In reference to rendering more definitive treatment, it is important to remember that just as over-enthusiastic diagnostic measures may be harmful, so ill-advised treatment may be even more harmful Often, the best treatment for a time may be no treatment other than rest and cautious sedation.

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Noise, bustle, prolonged venipuncture, blood pressure determination every few minutes, multiple examinations, shifting positions for x-rays and many other things may do great harm. A quiet room, reasonably subdued light, a comfortably padded table or a bed, permitting the patient to assume the position most comfortable to him and minimal numbers of disturbing stimuli may greatly hasten recovery from shock and restoration to good condition. Inhalation of oxygen, administration of appropriate drugs and intravenous solutions and transfusions of plasma or blood may be important. Occasionally, of course, operative procedures may be necessary but if conditions dictate such the operation may be best deferred, for hours or even for days, as in the case of some orthopedic procedures.

Infection:

I have already referred to the fact that while every effort should be made to guard against infection, nevertheless insuring unhampered respiration and combating hemorrhage and shock may have to be given precedence over measures to minimize the threat of infection. As soon as possible, however, aseptic and antiseptic techniques must be employed. The first consideration is to prevent further contamination; covering wounds with sterile or as nearly sterile as possible materials. Applications of so-called antiseptic solutions, powders, and ointments to open wounds should be avoided. Careful cleansing by washing and irrigation is greatly preferable. Accurate cutting away of fragments of dead tissue and removal of foreign material and the application of dressings kept moist by normal sodium chloride solution and warm by properly conserved body heat may be potent local measures. The antibiotics and antitoxins constitute powerful systemic aids. Patients with severe wounds may wisely be given penicillin, possibly other specific antibiotics if indicated, and in appropriate instances antitoxin against tetanus and gas gangrene. Any wound which may provide anaerobic conditions and any grossly contaminated wound necessitate the use of tetanus antitoxin. A patient previously immunized by tetanus toxoid should at least be given a so-called "booster dose" of the toxoid. A seemingly insignificant nail or splinter wound may provide ideal soil for growth of anaerobic organisms. Although tetanus antitoxin may be an unnecessary precaution in all wounds and gas gangrene antitoxin is probably not indicated except in extensive or badly traumatized wounds, nevertheless judgment of the risk is fallible and when in doubt antitoxins and special antibiotics should be employed.

In detail, the emergency room treatment of the average patient with a wound might well be as follows: Clothing should be removed, cut away if necessary. Sedation should be supplemented if necessary, as already suggested. Anesthesia must be chosen appropriate to the necessities involved. Local anesthesia with procaine by field block, nerve block, or subarachnoid segmental block are often best. The last may best be avoided after severe hemorrhage or in marked shock. Intravenous anesthesia (sodium pentothal, etc.) and inhalation anesthesia may offer greater risk but may be necessary. Choice of the anesthetic agent had probably best be based largely on the experience of the anesthetist. Practically all traumatic wounds are contaminated, and, of course, some are grossly soiled. Therefore, wounds and adjacent areas should be washed with soap and sterile water and irrigated with a physiologic solution of sodium chloride, the vigor of the cleansing depending upon the tissue involved and the degree of soiling. It is my belief that all antiseptic solutions should probably be avoided. The area should be draped, local infiltration anesthesia injected if to be employed, and dead tissue cut away with the utmost care. Remaining dead tissue will promote infection. Sacrifice of viable tissue may greatly complicate the repair and utterly compromise the cosmetic result or function.

The surgical repair of a wound may be simple or extremely complicated and difficult. Skin, subcutaneous tissue and muscle seldom present great problems. Serious problems, however, often attend associated wounds of bones, tendons, nerves or viscera. In such cases, the services of a physician trained in those special skills should be sought, namely the orthopedic surgeon, the neurosurgeon, the general surgeon and so forth, depending upon the particular injury. Fractured bones must be set and supported, severed tendons and nerves must be quickly recognized and accurately repaired. Whatever is injured must be restored as well as possible. Dead space should be obliterated and complete hemostasis secured.

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Although many surgeons differ, I prefer not to bury unabsorbable material in contaminated, potentially infected wounds. Many recommend silk, cotton, stainless steel and other similar sutures, but I prefer catgut in most instances. If infection supervenes, non-absorbable ligatures and sutures may cause stubborn sinuses, drainage, and so forth. Catgut may theoretically enhance infection for a short time but after a few days it disappears and unhampered healing occurs. Plain or chromicized catgut in the smaller sizes, triple O, double O, single O and rarely No. 1 offer an adequate choice depending upon the strength needed. Interrupted sutures are best and all should be tied no tighter than necessary to lightly approximate the tissue, muscle or subcutaneous tissue.

Skin sutures of non-absorbable material seem to find almost universal acceptance. Silk, cotton, and monofilament synthetics ("Dermal'—D&G) in small sizes seem almost equally satisfactory. The monofilament suture with needle attached, in a sterile tube like catgut is invaluable. For best approximation the distance between sutures should be the same as the distance from suture to skin margin. The thinner the skin the smaller that distance must be. Many prefer interrupted sutures but I often choose the continuous suture. No suture should be tight enough to blanch the skin. Firm dressings offer helpful support of the wound though too tight dressings may be harmful. Skin sutures may sometimes be removed in a day or two if under no tension. The sooner they are removed the less chance there is for a cross-hatched scar.

In passing, it should be mentioned that metal clips may be quite useful in skin closure and also that narrow strips of ordinary surgical adhesive tape may approximate skin edges nicely. Adhesive strips may also be used to supplement skin sutures and it will be noted that the best healing often occurs beneath the adhesive stripped areas.

Cosmetic Appearance and Function:

The last two of the five topics chosen for elaboration may well be discussed together for both are intimately concerned with the conservation and the repair of remaining viable tissue. Both frequently entail considerable knowledge, experience, technical procedure, and judgment. Even as a physician in surgical practice exclusively, I refer, whenever possible, wounds that present real problems in cosmetics to surgeons especially skilled in plastic surgery. The initial repair of facial wounds and others that may result in disfigurement determines in large measure the final cosmetic result. Even multiple subsequent operations, often time consuming, disabling and costly, may not compensate for ill-advised or poorly executed initial wound repair. In addition to cosmetic disfigurement, serious loss of function also may ensue. Severed tendons and nerves are easily overlooked and in severely injured patients may not come to light for a long time—too late sometimes for restoration of good function to the part.

And so I believe that every physician, whether in general practice or in the practice of surgery, whether in general surgery or a particular branch of surgery, and whether in surgery exclusively or not should examine himself and attempt to objectively evaluate himself and his training, his capabilities and his facilities, and so determine within his own conscience what practice he may safely do. In the words of the Oath of Hippocrates, "I will not use the knife, not even, verily, on sufferers from stone, but I will give place to such as are craftsmen therein."

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SURGICAL TREATMENT OF PEPTIC ULCER*

DAVID B. CORCORAN, M.D., F.A.C.S.,
Lakeview Clinic,
Suffolk, Virginia

In discussing the surgical treatment of peptic ulcer it is important to emphasize at the outset that this treatment is not a substitute for medical treatment. In no instance, if we are to institute proper therapy, are we allowed a choice. One or the other is always indicated. Surgical therapy should be considered only under the following conditions: First, when medical therapy has been given a thorough trial and had failed; secondly, where it is obvious that medical treatment would be of no avail; and, thirdly, where medical treatment would entail greater risk to the patient's life than surgical treatment.

To apply these broad criteria to peptic ulcer it is first necessary to consider its two main divisions, gastric and duodenal.

GASTRIC ULCER

Gastric ulcer is distinguished from duodenal ulcer anatomically by its location, but therapeutically it is distinguished by the fact that it is frequently malignant, while duodenal ulcer is only rarely, if ever so. This is an extremely important point and deserves careful consideration, since in this instance we have to determine which type of treatment gives the patient a better chance of survival. Unfortunately, there is no means by which we can determine preoperatively whether a gastric lesion is benign or malignant. The so-called "trial of conservative treatment" is really no trial at all, since roentgenologists emphasize that a malignant gastric ulceration may seem to disappear on medical treatment only to re-appear later as a space occupying gastric carcinoma.

Walters, Gray and Priestly[1], in reviewing a series of patients who had resectable carcinomatous lesions of the stomach, report that one-third suffered from the so-called ulcer type of dyspepsia and four-fifths experienced temporary symptomatic relief on medical treatment. This uncertainty is not resolved by gastroscopic examination or by any other laboratory or clinical means available.

Achlorhydria associated with a gastric ulcer makes the possibility of malignancy much greater, but we must remember that achlorhydria is present in only 50% of the cases of gastric cancer. Allen[2] found the same incidence of achlorhydria in the cases with benign gastric ulcer as in those which proved to be malignant. These same findings were obtained by Kiernan[3].

All authorities agree that the only one who can say that a gastric ulcer is benign is the pathologist who examines it microscopically. The physician, then, who undertakes to advise treatment for a gastric ulcer is dealing with a lesion which may or may not be malignant. It would seem that his first concern would be to determine which treatment involved less risk to the patient's life. Is the risk of a medically treated gastric ulcer being malignant greater than the risk of a gastric resection?

Lahey[4] in 1948 stated that in his experience 10% of patients who are treated for gastric ulcer turn out to have malignant disease. Walters[5] states that 20% of the patients who are reported to have gastric ulcer on roentgenographic examination are found on operation to have malignant ulcers. Kiernan[6] states that 10% of gastric ulcers believed to be benign on x-ray examination will be found to be malignant. This same author reported that the lowest incidence of malignancy of ulcers anywhere in the stomach was 11%. This was along the lesser curvature. The highest was along the greater curvature; this was 96%. Allen and Welch[7] reported that 14% of the patients treated for benign gastric ulcer at the Massachusetts General Hospital over a ten year period proved to have cancer. In Allen's[2] series 20% of the ulcers on the anterior or posterior wall proved to be malignant. Holmes and Hampton[8] have shown that gastric ulcers located in an area two centimeters proximal to the pylorus are prone to be malignant, regardless of size.

How does this risk which is assumed by the average patient with a gastric ulcer who is treated medically compare to the risk of a patient undergoing surgical treatment? The mortality of gastric resection, which is the surgical procedure most frequently employed in the definitive treatment of gastric ulcer,

*Read before the 56th annual meeting of the Seaboard Medical Society of Virginia and North Carolina, Virginia Beach, Virginia, December 4-6, 1951.

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has decreased markedly in the last decade. Throughout the country in large and small hospitals, in competent hands, it probably does not exceed two or three per cent. Many reports in the literature over the past few years (Table I) have been much lower than this.

TABLE I

MORTALITY OF GASTRECTOMY IN VARIOUS SERIES

Authors	Year	No. Cases	Mortality
Nicolaysen & Fretheim	1951	280	.35
Glenn & Harrison	1951	309	1.9
Garlock	1949	187	.5
Colp et al	1948	100	0
St. John et al	1949	394	2.
Steinberg	1947	373	.8
Bradshaw & Hightower	1947	53	1.9
Kennedy & Reynolds	1946	90	0
King	1946	75	0
Mitler & Nicholson	1946	113	.9
Allen & Welch	1946	195	2.0

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These facts have resulted in the development of two schools of thought regarding the treatment of gastric ulcer. The first group believes that since the incidence of carcinoma is so much higher than the risk of surgical removal of the ulcer, all gastric ulcers without exception should be treated surgically. This is a sound view and one with which it is hard to find fault. If put into universal practice, it would most certainly bring many early carcinomas of the stomach to surgery at a time when they are most susceptible to cure. Others believe that in a young individual most gastric ulcers may safely be given a trial of conservative treatment. By this is meant two to three weeks of medical therapy under close supervision. If at the end of this time, the symptoms have subsided, occult blood in the stomach aspirations has disappeared and if the ulceration has either gotten much smaller or disappeared on x-ray visualization, this group believes that these patients may be safely treated medically under continued close observation as long as healing progresses and the patient remains asymptomatic. Most of these men will agree that patients over forty with chronic recurring gastric ulcers should be operated upon, as should all those with ulcers on the greater curvature and all those with ulcers over 1.5 centimeters in diameter.

In considering these opinions it is important to remember that the doctor who undertakes to give a gastric ulcer a trial of medical treatment is assuming a grave responsibility and has a most serious obligation to explain the possibilities to the patient and to make sure that the follow-up observation is as thorough as possible.

The following case is presented to show how difficult it may be to distinguish between a gastric ulcer and a malignant lesion.

Case I. This patient was a 72 year old male who had been suffering from indigestion for 30 years. For several years before examination he had been suffering from definite epigastric distress. For a few weeks before examination his indigestion and epigastric pain had become more severe and he had been troubled by nausea and occasional vomiting.

Upper gastro-intestinal x-ray studies were done on May 22, 1951 (Figure I). At this time a prepyloric gastric ulcer was visible and there was some narrowing and stiffening of the pyloric area. The diagnosis was prepyloric gastric ulcer. It was felt that carcinoma could not be excluded, but in view of the patient's age and poor physical condition and especially in view of the long history of dyspepsia, it

was decided to give him a three to four weeks trial of medical treatment.

On June 12, 1951, three weeks later, repeat upper gastrointestinal x-ray studies were made (Figure II). During this interval on intensive medical treatment, he stated that he felt better. His epigastric distress had cleared up and his only complaints were nausea and occasional vomiting. The films showed that the ulcer which was seen previously had disappeared. This time, however, the pyloric end of the stomach, in addition to being somewhat narrowed, appeared irregular and mottled. This picture was considered very suggestive of carcinoma. Operation was decided upon, the patient was hospitalized, and after three days of preparation, gastrectomy was performed. At operation the specimen showed a deep crater form ulcer surrounded by a tumor about three to four centimeters in diameter which was composed of hard, white, granular tissue. Pathological diagnosis was adenocarcinoma. This patient died on the tenth post-operative day.

Fig. 1.—Roentgenogram showing prepyloric ulcer which proved to be part of a malignant lesion.

Discussion: This case illustrates the difficult decisions which often have to be made in the treatment of these patients. The main deterrent to surgery here was this man's poor physical condition. It was felt that he was a very poor risk to any type of surgery and that every effort should be made to avoid operation. The history of indigestion of thirty years duration and definite ulcer symptoms, including epigastric pain for several years, pointed strongly against the probability of malignancy. Here also we see that symptomatic relief and the disapperance of the ulcer under medical management do not necessarily rule out the possibility of malignancy.

Fig. 2.—Follow-up film three weeks later, showing disappearance of malignant ulcer.

CHOICE OF OPERATION IN GASTRIC ULCER

Gastric resection is the operation of choice in the treatment of gastric ulcer. This procedure properly performed, with the removal of at least three-fourths of the lower end of the stomach, results in removal of the ulcer, usually with a wide margin of normal tissue. The acid secretion is markedly diminished because of the removal of the antrum, which is the site of production of the hormone "gastrin" and because of the removal of a large portion of the parietal cells. A properly performed gastric resection will result in a minimal number of jejunal ulcers and the percentage of satisfactory results has been uniformly high.

Gaviser[9], reporting on Wangenstein's patients, found excellent results in 76%, satisfactory results in 21%, and poor results in 2.7%. Welch and Allen[7] found that 75% of their cases became asymptomatic after gastric resection, 15% continued to have trivial complaints which were readily controlled by diet, and 10% required medical attention for relief. Walters

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and Clagett[10] reported one poor result in a series of 162 cases.

The type of gastrectomy most frequently performed is the Polya procedure, or the Hofmeister modification of this procedure. The anastomosis may be placed anterior or posterior to the transverse colon. Our personal preference is for the posterior Polya procedure because this makes possible the use of a shorter afferent loop. Experimentally, the resistance of the jejunal mucosa to gastric contents has been shown to increase as we approach the duodenum; hence a short afferent loop should decrease the incidence of jejunal ulcer.

We believe that it is important to avoid the use of crushing clamps in performing the anastomosis. The widespread employment of these clamps does not change the fact that their use violates fundamental surgical principles. If an open anastomosis is performed without crushing or traumatizing the tissues, accurate approximation and thorough hemostasis can be obtained; the incidence of post-operative edema of the stoma and post-operative hemorrhage will be markedly reduced and the need for post-operative gastric suction will be the exception rather than the rule. These patients are usually able to take small amounts of water by mouth on the first post-operative day and start taking a bland diet on the second or third post-operative day.

Gastro-enterostomy is not satisfactory in the treatment of gastric ulcer because it does not result in the removal of the lesion which may be malignant, because the reduction in the acid content of the stomach is not nearly as marked or as permanent as with gastric resection and because it is followed by a much higher percentage of jejunal ulcer than is gastric resection.

Vagotomy alone is not applicable because the potentially malignant lesion is not removed and because of the high incidence of recurrence and the possibility of the development of delayed gastric emptying. Vagotomy in association with gastro-enterostomy relieves the possibility of delayed emptying but does not take care of the other reasons for not employing this procedure in the treatment of gastric ulcer.

DUODENAL ULCER

In considering the surgical treatment of duodenal ulcer, the picture is completely different. Here the question of malignancy is not a factor and surgery should be employed only after medical therapy has failed. Approximately 85% of duodenal ulcers respond satisfactorily to medical therapy[11]. The performance of a gastric resection for the treatment of a duodenal ulcer is more hazardous than for gastric ulcer. This is due to the difficulty often experienced in freeing a sufficient segment to effect a safe closure of the duodenal stump. The cases of duodenal ulcer which do not achieve the desired results under medical therapy and have to be treated surgically are those which develop intractable pain, hemorrhage, obstruction or perforation.

Intractable Pain. If a patient who has had prolonged active treatment of a duodenal ulcer has continuous intractable pain which interferes with his ordinary activities, surgical treatment is recommended. In this case we are dealing with a condition where medical treatment has been of no avail and another approach must be employed if we are to have any chance of improving an intolerable situation. The following case report presents an instance where surgical therapy was employed in the treatment of a duodenal ulcer because of intractable pain in a patient who would ordinarily not be a good candidate for surgical treatment.

Case 2. This twenty-three year old girl had a long history of duodenal ulcer which had been diagnosed by roentgenologic examination. For two years before referral she had suffered severe epigastric pain which did not respond to intensive medical therapy. She was unable to deviate from a Sippy #1 diet without severe exacerbations. Her symptoms were becoming steadily more severe; periods of complete rest resulted in partial alleviation, but pain recurred as soon as she returned to work or deviated from her Sippy #1 diet. This patient worked as a telegraph operator and had no independent means of support. It was clear that unless something further could be done she would become a complete invalid with little hope of further improvement. Surgical therapy was decided upon. The patient was brought into the hospital, prepared for surgery and a gastrectomy was performed, about 80% of the stomach being removed. Her post-operative course was uneventful and she was discharged from the hospital on a bland diet on the tenth post-operative day. She returned to work and, although only 18 months have elapsed thus far, she has not had any further trouble.

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Discussion: This patient illustrates the fact that at times surgical therapy may have to be employed under unfavorable circumstances because it is the only recourse left. No one likes to perform a gastrectomy on a patient this age, but at times it may be necessary. When performed, the operation should be radical, a somewhat larger portion of the stomach being removed than usual. Care should also be taken to make the afferent loop as short as feasible. A gastrectomy in a twenty-three year old patient has to last a long time, and will have a correspondingly greater opportunity to develop a marginal ulcer. Every possible effort should be taken at the time of surgery to prevent this from occurring.

Hemorrhage: The problem of severe bleeding from peptic ulcer is probably the most controversial of all, but the great majority of authorities today will admit that there are certain cases whose lives will be saved by surgical intervention if this is employed at the correct time. The results of Meulengracht[12], the foremost advocate of exclusively conservative treatment, who reported a mortality of one per cent, have not been duplicated. In analyzing his cases, Holman[13] found that most of his fatalities occurred in two types of patients: (1) those who continued to bleed for twenty-four to forty-eight hours after they had been placed on a medical regime, and (2) those who started to bleed while in the hospital under medical treatment for a previously uncomplicated ulcer. Under conservative treatment the mortality in these two groups was over fifty per cent. It is a well known fact that the average age of the patients who terminate fatally under conservative treatment is higher than those who do not. The above author by submitting all patients in these two groups to emergency surgery was able to reduce a mortality of 50% to five per cent. The findings of other authors both here and abroad are pretty much in agreement that a bleeding peptic ulcer which does not respond to medical treatment within twenty-four to forty-eight hours after admission to the hospital and any peptic ulcer which develops hemorrhage while under medical treatment in the hospital and continues to bleed, has a better chance to survive under proper surgical treatment.

The influence of age is an important one here and in patients over forty-five one should be much more prone to institute early surgical treatment for two reasons: First, an elderly patient is much less able to withstand the onslaughts of repeated hemorrhage, and, secondly, the hemorrhage occurring in the sclerotic vessels located in the fibrotic ulcer bed of the patient over forty-five is much less likely to stop spontaneously than is the hemorrhage occurring from the soft walled vessel in the active ulcer bed of the younger individual.

For the above reasons also, once the immediate danger from hemorrhage is passed, we believe that any patient who is over fifty years of age and has survived one serious hemorrhage should be operated upon. We also believe that a patient of any age who has survived two serious hemorrhages should be submitted to surgery. In these cases the patient may be well prepared for an elective operation and the risk involved in surgical therapy is less than the risk of a subequent fatal hemorrhage.

The following brief case report illustrates the surgical treatment of a typical bleeding duodenal ulcer and some unusual post-operative complications.

Case 3: This 34 year old colored male was sent into the hospital because of severe hematemesis and melena of two days duration. He gave a history of ulcer symptoms extending back five years and had had two previous episodes of severe hemorrhage. Duodenal ulcer had been diagnosed by x-ray after the first attack.

He was in fairly good condition on admission, his blood pressure being 90/65 and his red blood count 3,230,000 with 53% hemoglobin. He continued to bleed severely for the first two hospital days so that his red blood count dropped to 1,870,000 with 28% hemoglobin. During this time he was treated conservatively with sedation, antacids and a bland diet. After the second hospital day signs of hemorrhage disappeared and his condition improved steadily. Transfusions sufficient to bring his blood picture back to normal were given and upper gastro-intestinal x-ray studies were made. These showed a duodenal ulcer. Because of the history of three episodes of severe gastric hemorrhage surgical therapy was advised.

At operation an ulcer of the posterior wall of the distal portion of the first part of the duodenum was found. It was densely adherent to the surface of the pancreas. The duodenum was divided and the duodenal stump was closed, leaving the ulcer undisturbed. A gastrectomy was then performed. This patient did unusually well. He was up and about

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and taking fluids well on the first post-operative day and was able to take a bland diet on the second. He remained quite active and at his own insistence was discharged on a bland diet on the fifth day after operation. The original plan was to have him come back on the tenth post-operative day to have his sutures removed, but due to a misunderstanding these were removed by the nurse before he left the hospital. He remained on his bland diet for the first 24 hours at home, but on the morning of the second day he ate an orange. Shortly after this he became nauseated and vomited a large amount of blood. This was followed by continued severe retching and the patient eviscerated. He was sent back to the hospital where immediate closure of the evisceration was performed. The post-operative course once more was uneventful. He had one tarry stool the first post-operative day and none thereafter. He was started on a Sippy #1 diet on the second post-operative day and gradually worked up to a bland diet on which he was discharged. One year has elapsed thus far without any further complications.

Discussion: This case is presented because of its unusual aspects. It is an illustration of the fact that though ulcers located in the second part or the distal portion of the first part of the duodenum may usually be safely left undisturbed at the time of surgery, if hemorrhage is a factor every effort should be made to avoid irritating the ulcer post-operatively until it has had a chance to heal. Even in the presence of hemorrhage we believe that more lives will be saved by not removing ulcers in these locations. This is especially true when, as is often the case, they are firmly fixed to the surface of the pancreas.

Obstruction: When a patient with a duodenal ulcer develops pyloric obstruction which cannot be relieved by medical means, some type of surgical relief must be sought. These patients may or may not be previously diagnosed and already receiving medical therapy. In either case it is important to remember that here, in contra-distinction to some of the other conditions mentioned, there is no need for haste. A patient with complete pyloric obstruction due to duodenal ulcer may be cared for in the hospital under medical management consisting of antispasmodics, constant gastric suction and properly selected parenteral fluids, protein and blood for sufficient time to determine definitely whether or not the obstruction will clear up after edema and spasm have been eliminated. Four or five days should be long enough to determine this and on occasions one may be surprised to see an obstruction clear up to the point where surgery is no longer necessary.

Case 4: This 46 year old married woman was first admitted to the hospital because of upper abdominal pain, nausea and vomiting. X-ray studies done before admission had revealed an enormously dilated stomach (Figure III). There were occasional rushes of vigorous peristaltic activity but for the most part peristalsis was entirely absent. There was complete retention on the five hour films. This obstruction was assumed to be due to an old duodenal ulcer with cicatricial contraction. She was put on constant gastric suction, parenteral fluids and antispasmodics and, as symptoms of obstruction subsided, she was placed on liquids by mouth and gradually worked up to a Sippy #3 diet. She was discharged on the 15th hospital day without any symptoms of obstruction. X-ray studies 18 days after the original ones showed no gastric dilatation. There was moderate pylorospasm but no evidence of obstruction.

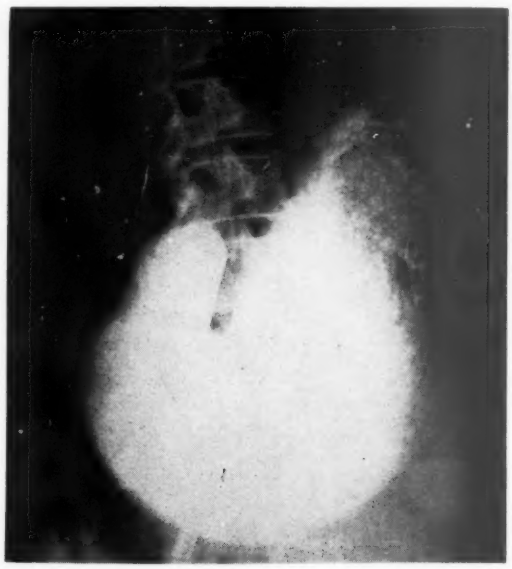

Fig. 3.—Roentgenogram showing dilated stomach due to duodenal ulcer which cleared up on conservative treatment.

This patient continued to do well and two other x-ray studies taken during the following year did

not reveal any evidence of obstruction. A little less than two years from the time of the previous admission she had a recurrence of nausea and this was followed by vomiting. X-ray studies showed a huge dilated stomach and complete pyloric obstruction. She was rehospitalized and placed on the same regime described above. This time even though symptomatic improvement was obtained, surgery was advised because it was felt that another recurrence was likely. After three days of preparation, gastrectomy was performed.

At operation the stomach, although still dilated, appeared much smaller than on the last x-ray examination. This patient's post-operative convalescence was uneventful. She was allowed small amounts of water on the first post-operative day and was given

Fig. 4.—Recurrence of same pyloric obstruction two years later.

a bland diet on the second. She was discharged from the hospital on a regular diet on the 12th post-operative day. She has been followed for a little over a year now and has had no further difficulty.

Discussion: This case illustrates how even a very serious case of pyloric obstruction due to ulcer may clear up under medical management. Even when surgery is decided upon beforehand, these patients benefit from a preliminary course of three or four days of gastric decompression. For the most part pyloric obstruction due to cicatricial contraction about an old duodenal ulcer in a young or middle aged person is almost certain to recur even if it does respond temporarily to medical treatment. In an elderly individual this is less likely to be the case.

Perforation. Perforation which may occur in a gastric or duodenal ulcer is mentioned here because the great majority of perforated ulcers are duodenal and are usually located on the anterior wall of that structure. Baritell[14], on the basis of his statistics, concludes that there are 35 patients who develop a perforated ulcer per 100,000 population per year and there are five perforated ulcers for every 1000 hospital admissions. Males out-number females by at least 10 to 1, the perforation usually takes place after forty and, while peptic ulcers may perforate without any previous symptoms, about 75% will give a history if carefully questioned[15].

Medical treatment consisting of constant gastric suction, antibiotics and morphine has been recommended by some as the treatment of choice. The great majority of authorities, however, favor surgical therapy simply because it is a more logical approach and because in signficant series the results are far superior.

CHOICE OF OPERATION IN DUODENAL ULCER

In all cases of duodenal ulcer except those being treated for perforation, the most frequently employed operation is gastric resection. This procedure, according to the report of Gaviser[9], achieved an excellent or good result in 82% and a satisfactory result in 15% of 231 duodenal ulcers. Walters and his associates[16], in a study of 197 patients with duodenal ulcer, found that 83.5% were well without any limitation, and that 14% were well on a dietary regime after gastric resection. Miller[17], reporting on 230 patients with duodenal ulcer, found that 90% were cured and 10% were improved after gastrectomy.

Gastric resection, as mentioned above, is a more formidable and hazardous procedure when performed for duodenal than for gastric ulcer, due to the difficulty entailed in obtaining sufficient tissue to perform a safe closure of the duodenal stump. One of the most effective means of remedying this difficulty when it is encountered is to divide the stomach just proximal to the pylorus and remove all the mucosa of the antrum. In this manner sufficient tissue is saved to effect a sound closure and the beneficial

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effect of the operation on gastric acidity will not be interfered with. Equally good results may be expected after this procedure and after operations where the entire pylorus is removed[9].

Another method of dealing with this situation is the technique of exclusion. In using this technique the duodenum is divided, the ulcer is left undisturbed and the duodenal stump is then carefully closed in layers and turned down over the ulcer base.

Adherent ulcers located in the region of the ampulla of Vater present another technical problem, which is best solved by leaving the ulcer undisturbed and performing an adequate gastric resection The great weight of reported evidence seems to indicate that this is a safe procedure which does not influence the post-operative result.

Partial gastrectomy is recommended as the treatment of choice in duodenal ulcer because it is a tried and proven procedure which has been used over a long enough period of time to definitely establish its effectiveness. Where the procedure has been properly indicated and properly performed the results have been good and the complications few. According to all statistics presently available, these results are superior to those obtained with any other single surgical procedure.

Complete vagus resection produces an inhibition of all of the cephalic and much of the inter-digestive phase of gastric motor and secretory activity. It reduces the motility of the stomach and prolongs the emptying time. In general, the immediate results are striking in patients with duodenal ulcer. Pain disappears and most lesions heal promptly. Short term follow-up studies indicate that recurrences are infrequent in spite of the tendency for the stomach to become activated. Reports of longer studies, however, are beginning to appear that indicate that the beneficial results are of temporary duration. Even the most ardent advocates of the operation no longer recommend its performance for duodenal ulcer without it being accompanied by a gastric drainage procedure such as gastro-enterostomy. This has been done in an effort to prevent the high incidence of post-operative complications, chiefly gastric retention but also diarrhea and intermittent abdominal colic. We must all admit that sufficient time has not yet elapsed to determine whether vagus resection will prevent the high incidence of jejunal ulcers which followed the routine use of gastro-enterostomy in the treatment of duodenal ulcer in years gone by.

We believe that vagus resection has no place in the routine treatment of duodenal ulcer at the present time. We have no quarrel with those who combine this procedure with gastric resection in the treatment of either gastric or duodenal ulcer or both, but we have not been convinced that the possible improvement which may be obtained justifies this addition to a procedure which is already producing highly satisfactory results. The forte of vagus resection is in the treatment of marginal or jejunal ulcers which occur as a complication of gastrectomy. Here the results obtained with this procedure have been superior to those obtained with any other. Indeed, no other surgical procedure has much to offer in the treatment of a marginal ulcer which occurs after an adequate gastrectomy has been performed. In regard to the marginal ulcer which develops after an inadequate gastrectomy, we believe that, if the patient's condition permits, this should be treated by an adequate gastrectomy, probably accompanied by vagotomy. If the patient's condition does not make an adequate gastrectomy seem feasible, vagotomy alone is the procedure of choice.

Gastro-enterostomy is a procedure which was formerly very popular in the treatment of peptic ulcer and at one time was performed much more frequently than gastric resection. It will decrease the emptying time of the stomach and short circuit an obstructed pylorus. It permits partial neutralization of gastric acids by the alkaline duodenal juices but the reduction in the acid secretory response to histamine is slight[19]. The procedure fails to remove the ulcer bearing area and long term studies have revealed that it is followed by a high incidence of marginal ulcer[20]. This latter difficulty has led to its fall from grace and at present it is recommended only for those cases of pyloric obstruction whose physical condition makes them poor risks for a gastrectomy.

As regards the choice of operation for perforation of a peptic ulcer, there is general agreement that closure of the opening by the simplest method available is the procedure of choice. This can usually be done by placing two or three Lembert sutures across the hole and covering this with piece of omentum. No other surgery is indicated unless it

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is absolutely necessary at the time. If there is complete or almost complete pyloric obstruction, a gastro-enterostomy is justifiable, but if this is not absolutely necessary it should be postponed to a later date. A patient with a perforated peptic ulcer is in a precarious position at best. He is undergoing a procedure which already entails a much higher risk than does an elective gastrectomy. This risk should not be magnified by the addition of any surgery which may be postponed until a later date.

SUMMARY

Surgical treatment should be employed in the therapy of peptic ulcer only after medical treatment has been given a thorough trial and has failed, or where it is obvious that medical treatment would be of no avail, or where medical treatment would entail greater risk to the patient's life than surgical treatment.

In gastric ulcer the chance of the ulcer being malignant is much higher than the mortality of gastric resection and surgery is usually indicated. Medical treatment under the above circumstances requires constant continued supervision and periodic x-rays. In duodenal ulcer malignancy is not a factor and surgery need be employed only in the case of intractable pain, hemorrhage, obstruction, or perforation. Intractable pain which persists after thorough prolonged medical treatment is an indication that medical treatment has failed. Cases of hemorrhage who continue to bleed after forty-eight hours of medical treatment and those who begin to bleed while under medical treatment in the hospital will have a better chance of survival if surgical treatment is employed. The same is true in a patient who has survived two serious hemorrhages or in a patient over fifty who has survived one.

Cases of obstruction which do not respond to medical treatment must be treated surgically.

The choice of operation in the great majority of peptic ulcers undergoing surgery is gastric resection. We believe that vagotomy should be reserved for marginal ulcers occurring after the performance of an adequate gastrectomy and for certain poor risk cases of pyloric obstruction where it should be employed in combination with a gastro-enterostomy.

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THE RELATIONSHIP OF THYROID NODULES TO CARCINOMA*

CARRINGTON WILLIAMS, JR., M.D.,
Richmond, Virginia

Energetic efforts on the part of the American Cancer Society and other public agencies have emphasized in the eyes of the laity the prevalence of malignant diseases. One facet of the many-sided program to prevent deaths from cancer has been to point out to the medical profession various types of pre-cancerous lesions which can be properly dealt with before the development of frank malignancy. Ever-increasing public awareness and dread of cancer make it mandatory that we as doctors recognize such pre-malignant conditions and advise proper treatment. Among common symptoms for which anxious patients consult us on account of the possibility of having cancer, the presence of an abnormal lump or mass is perhaps the most frightening. The physician's responsibility, then, is to separate malignant tumors from benign, and, furthermore, to divide benign into potential cancers and innocent growths.

Abnormal masses in the thyroid gland should be easily seen or felt before they have reached an advanced state, and therefore patients with such conditions are usually seen by a doctor relatively early in the course of the disease. The problem with thyroid enlargements or growths is to determine early which ones should be removed and which ones can safely be kept under observation. It is beyond the scope of this paper to outline the treatment of obvious carcinoma of the thyroid, and the discussion will be confined to an analysis of the relationship of thyroid nodules to cancer.

At the outset, it should be pointed out that the incidence of thyroid carcinoma is so low that vital statistics rate the thyroid sixteenth in the list of organs affected by malignant disease. Nevertheless the disease assumes more importance when we consider how unamenable to treatment thyroid malignancies often are after they have become well established.

The likelihood of development of fatal carcinoma of the thyroid has been minimized in recent reports concerning vital statistics. Vander Laan reviewed the records of the Boston City Hospital over a 50 year period and found in 18,668 autopsies only 5 cases where death was due to cancer of the thyroid gland. Williams and his group found that in 544,-918 admissions to the Boston City, Johns Hopkins, and Massachusetts General Hospitals, there were 3,221 patients with goiters and only 64 cases of thyroid cancers. Also, at Michael Reese Hospital, in 5,558 autopsies performed in an 18 year period, only 6 persons died of carcinoma of the thyroid.

With such a low incidence at the autopsy table, why, then, does thyroid cancer assume a position of importance? The obvious answer to this is that the majority of people dying of this disease succumb at home, do not come to autopsy, and thus are not included in these statistics. Furthermore, confusion in terminology has led to disagreement among pathologists over what actually constitutes cancer of the thyroid gland. Certainly histologic study of thyroid tissue is difficult and is further complicated when the newer antithyroid drugs of the thiourea group have been used.

Our other source of material for pathologic study, the surgical pathology laboratory, furnishes us with an entirely different viewpoint. Statistics drawn from this source indicate a remarkably high incidence of carcinoma in nodular goiters. A general review of recorded series shows that the incidence of carcinoma in thyroidectomies performed for nodular goiters is around 7%, and even higher in the non-toxic type.

TABLE I
INCIDENCE OF THYROID CANCER
IN ALL NODULAR GOITERS

Crile (1949)	5.6%
Hinton and Lord (1945)	7.6%
Cole (1944)	7.2%

The reasons for such disparity in autopsy and surgical statistics have been pointed out by Crile. First, the patients coming to thyroidectomy have been carefully screened at first by the patient, then by the referring physician, and finally by the surgeon, and many obviously innocent goiters are never operated upon. Second, confusion as to what constitutes thyroid cancer confounds the issue. Third, the method

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of presentation of statistics by different investigators is misleading; for example, it would be as wrong to include all frank carcinomas in a series of nodular goiters as it would be to list all ulcerating gastric carcinomas in a study of stomach ulcers.

It is apparent that the high incidence of thyroid cancer in patients operated upon is not a true picture of the general incidence. On the other hand, what policy is to be pursued in dealing with nodular goiters? We can immediately dismiss from this discussion all *toxic* nodular goiters. Here, the occurrence of malignancy is so rare as to be a curiosity, and, therefore, toxic nodular goiters can be dealt with without fear of malignancy. Among the non-toxic nodular goiters, malignancy is much more common in single nodules than in multinodular glands. From the accompanying table it can be seen that the overall incidence of carcinoma in surgically removed non-toxic nodular goiters approaches 10%, while in single nodules it approximates 20%.

TABLE II
INCIDENCE OF THYROID CANCER
IN NONTOXIC NODULAR GOITERS

		Single Nodules	Multiple Nodules	All Nontoxic Nodular Goiters
Crile	(1949)	24.5%	10.9%	
Cope	(1949)	19.0%	10.1%	
Cole	(1944)			17.1%
Cole	(1949)	24.0%	11.0%	17.2%
Soley	(1948)	16.6%		
Lahey	(1951)	10.04%		
Coffey	(1950)	21.7%	6.6%	11.5%

Development of malignancy in nodules in the thyroid gland is debatable. Lahey and others feel that thyroid cancer definitely originates in pre-existing adenomas. On the other hand, Crile states that surgeons should think of discrete tumors of the thyroid not as benign adenomas which may become malignant, but as tumors which may be cancerous at the time of operation. Cope emphasizes that the high incidence of malignancy in single nodules is not surprising in view of the definition of *neoplasia:* "A neoplasm is an area of tissue growing without regard to the normal needs of cell regeneration and out of bounds of normal physiologic control. No neoplasm is known which afflicts an entire organ or tissue from its inception. A neoplasm starts in one area only—never spontaneously and evenly throughout the whole. Thus from the anatomic point of view a neoplasm is in contrast to hyperplasia or hypertrophy, growths affecting the whole simultaneously and to comparable degree. Neoplasms may be either benign or malignant. This distinction between benign and malignant is drawn anatomically by the following criteria—benign displaces but does not invade the neighboring tissue; the benign does not metastasize."

If the problem of the solitary thyroid nodule is viewed as a whole, it would seem wise to advise surgical excision of such a mass rather than to take a chance on missing a malignant tumor. As Ward has stated, "a definite diagnosis of malignant goiter should seldom be made. If one waits for the textbook picture, the time for surgical cure has passed." In addition, he points out that among patients with thyroid carcinoma, only 20% will survive for five years when the diagnosis is made pre-operatively, 40% when it is made at operation, and 80% will be alive and well after five years when the diagnosis is made in the pathology laboratory. Therefore, with the almost insignificant and negligible mortality and morbidity from operative removal of single thyroid nodules, the indication appears to be clear-cut that all solitary adenomas should be surgically removed at an early date.

Palpation of solitary nodules in an otherwise normal-feeling thyroid gland is unreliable, insofar as it is possible thereby to make an accurate preoperative diagnosis. It is impossible by this method to distinguish between true adenomas, involutional colloid cysts, inflammatory lesions, and carcinoma. This furnishes further evidence of the advisability of surgical removal of single nodules. Soley has estimated that in every 100 cases of operation for solitary nodules, 40% will be found to be involutional (colloid) nodules, 23% will be benign adenomas, and 17% will be malignant. In this connection, a satisfactory working classification of thyroid "adenomas" is as follows.

TABLE III
CLASSIFICATION OF
THYROID ADENOMAS

1. True adenomas
   a. Embryonal
   b. Fetal
   c. Hurthle cell
2. Colloid
3. Papillary cystadenoma

True adenomas and cystadenomas may become malignant while the colloid type is involutional in nature.

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To sum up the problem of solitary thyroid nodules, pre-operative diagnosis by palpation is inaccurate and unreliable; the incidence of carcinoma in surgically removed single nodules is strikingly high; the mortality and morbidity from surgical removal of such a nodule are negligible; the safest plan by and large is to remove completely any solitary nodule of the thyroid gland. Crile has listed for categorical purposes the following indications for surgical removal of thyroid nodules.

TABLE IV

INDICATIONS FOR REMOVAL OF THYROID NODULES

1. All enlarging adenomas.
2. Those of firm consistency which is different from remaining gland.
3. Those giving pressure symptoms.
4. Those for cosmetic reasons.
5. Those in children.

A different situation exists where the patient has a multinodular nontoxic goiter. Here the incidence of malignancy is not nearly as high as in the single adenoma, but from the statistical studies quoted above it is clear that a real danger of cancer exists here too. While removal of all solitary nodules is urged, thyroidectomy for all multinodular goiters is not so compelling. The hazards of thyroidectomy for all nodular goiters are of some consequence and are probably not justified for the sole purpose of preventing cancer of the thyroid. Also, Cope has reported instances where malignancy developed in thyroid remnants after prophylactic thyroidectomy. It is probably wise to remove for cancer prophylaxis all nodular goiters which have shown evidence of growth or other suggestions of malignancy. There are other indications for thyroidectomy in multinodular glands, such as pressure symptoms, unsightliness, and so forth, but operation for cancer prevention is not as imperative in multinodular goiters as it is for the single adenoma. However, it should be kept in mind that, although goiters are more common in females, the incidence of cancer in nodular goiters in men is three times as high as in women. Hence we should be more intent to remove multinodular non-toxic goiters in men than in women.

Finally, with regard to the overall problem of malignancy in nontoxic nodular goiters, a comparative study by Hinton and Lord is quite graphic. They found that among breast tumors which were diagnosed pre-operatively as being benign the incidence of malignancy at operation was 6.7%. Among nodular goiters considered pre-operatively to be benign, the incidence of malignancy was 7.6%. No one hesitates to recommend biopsy and histologic study of breast nodules; therefore, why should not the same policy be applied to the thyroid? One explanation may be that the "occasional" surgeon does not hesitate to remove a breast tumor, but does pause before attacking the more formidable neck region.

In summary, the incidence of malignancy in nontoxic nodular goiters treated surgically is in the neighborhood of 10%, while it approaches 20% when we consider only solitary nodules. Pre-operative diagnosis by palpation of solitary nodules and by consideration of the age of the patient and the size of the lump is not entirely satisfactory. All single nodules should therefore be surgically extirpated early unless strong contraindications exist. Multinodular goiters should be carefully screened before the decision only to observe the patient is made. The mortality and morbidity from surgical removal of thyroid nodules are extremely low; hence thyroidectomy for cancer prophylaxis is recommended in all single adenomas and in multinodular goiters where uncertainty exists. Since the incidence of unsuspected malignancy in nodules of the breast and thyroid treated surgically is approximately the same, a plea is made for early surgical removal of these nodules as a means toward earlier diagnosis and treatment of thyroid cancer.

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805 West Franklin Street.

Doctors Minister to King Football.

Gridiron game time can mean kick-off time for a new public relations project. Lynchburg, Va. doctors are calling the signals on this PR play. Each year members of the *Lynchburg Academy of Medicine perform complete physical exams for members of the local high school football squad* and also arrange for a doctor to be in attendance at every game—at home or away.

The high school coach notifies the Chairman of the Lynchburg Academy Public Relations Committee each fall when football practice is about to begin. Then a special day is set aside on which five Academy members go to the football stadium, examine all players free of charge and issue health certificates.

Whenever the Lynchburg team plays at home, two doctors from the Academy sit on the bench to provide any needed medical attention. If the visiting team requests it, a doctor is supplied for their players, too. When the Lynchburg team plays away from home, either an Academy member attends the game or the Public Relations Committee makes arrangements for a doctor in the town in which the game is played to attend the team.

Dr. John W. Davis, Jr., of Lynchburg, reports that *"families of the players seem to greatly appreciate this little service"* . . . which only goes to show that pigskin and PR are a potent combination. (The PR Doctor, November 7, 1952.)

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MANIFESTATIONS OF EXTRINSIC PRESSURE ON THE INTESTINES BY DISTENDED URINARY BLADDER*
(2 Case Reports)

HAROLD GOODMAN, M.D.,
Washington, D. C.

In barium studies of the gastro-intestinal tract, a distended urinary bladder may produce displacement and pressure deformity of the small and large bowels. By virtue of its not too infrequent occurrence, roentgenologists are cognizant of this finding. The fact that this condition is so evident, will explain, perhaps, why perusal of periodicals of the past twenty years, and of the recent textbooks, yielded no mention of the subject. Nevertheless, errors are made occasionally and a diagnosis of neoplasm or cyst will be rendered.

The findings produced by either a distended urinary bladder or a retroperitoneal or abdominal neoplasm can be identical. An attempt to rule out the former is frequently made by having the patient void and immediately repeating the intestinal film. If the mass persists, one may conclude that it is not the bladder. However, this is not infallible, as will be shown later. In patients with marked urinary retention, although a considerable quantity of urine is voided, the residual urine in the bladder may be sufficient to cause displacement and pressure deformity of the bowel.

The fact remains that, to rule out a distended urinary bladder, one must first think of this condition. Then it is necessary not only to have the patient void, but to catheterize the bladder and make certain that this viscus is empty.

The following two cases are examples of errors in roentgen diagnosis due to a distended urinary bladder (in one case after the patient had been instructed to void), causing displacement and pressure deformity of the bowel.

Case 1: J. C. (Register No. 22-738), a 58 year old colored male was admitted September 14, 1949, with the chief complaint of stomach trouble and weakness of two months duration. There was a gradual onset of anorexia, weakness, and a weight loss of twenty pounds. He had been told by his local physician, following x-ray examination, that he had "an ulcerated stomach". No relief was obtained by a bland diet and medication. For three weeks prior to admission, he had noticed tarry stools. Repeat x-ray examination was done and he was told his ulcer was spreading and hospitalization was advised.

Systems review revealed progressive nocturia, which at time of admission was three times nightly. He also noticed urgency and diminution in size and force of his urinary stream.

Physical examination was that of a well developed, thin, cachectic, Negro male in no acute distress. Temperature was 98.6. Blood pressure was 166/108. The abdomen was negative. Rectal examination disclosed that just inside the external sphincter was a hard, lobular mass in the region of the prostate and cul-de-sac.

The hemoglobin was 11.8 grams with 4,200,000 red blood cells, 5,000 white blood cells and 53% neutrophils.

Urinalysis showed a specific gravity of 1.010, no albumin, no sugar, and 4-5 white blood cells.

Barium enema examination on September 16th showed the distal one-half of the sigmoid colon to be narrowed with evidence of extrinsic pressure, the colon being displaced posteriorly. The distal ileum was displaced superiorly and anteriorly.

Barium meal examination on September 20th showed an irregular defect along the greater curvature of the midportion of the body of the stomach. Upon reexamination one week later, this defect was less prominent and was considered to be enlarged rugae. A film taken six hours after the ingestion of the barium (Fig. 1) showed evidence of a mass situated in the midline, overlying the midportion of the sacrum and displacing the small intestine to either side. The exact origin of the mass could not be determined except that it definitely did not arise from the large or small bowel.

Gastroscopy on September 21st revealed a normal

*From the Department of Radiology, Veterans Administration Hospital, Richmond, Virginia.

Sponsored by the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the author are the results of his own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

stomach and antrum. The greater curvature of the stomach showed large rugae.

On September 21st, the patient was seen in consultation by the Urology Service. The previously described rectal mass was again noted. The patient voided 300 cc. of urine. He was then catheterized and 400 cc. of residual urine was obtained. The rectal mass disappeared. The blood urea nitrogen at this time was 41.

Fig. 1.—Film taken six hours after barium meal. Small intestine displaced to either side indicating presence of midline mass.

Cystoscopic examination was done on September 26th and a diagnosis of benign prostatic hypertrophy was made.

The repeat barium meal of September 28th no longer showed evidence of the previously described mass on the six hour film (Fig. 2). It was concluded that this mass was due to a distended urinary bladder. The barium enema on October 20th was also normal.

Intravenous pyelography on October 17th revealed hydronephrosis and a poorly functioning left kidney.

A supra-pubic prostatectomy on October 17th disclosed a benign prostatic hypertrophy.

Prior to discharge the blood urea nitrogen decreased to 21. The patient was discharged November 22nd much improved.

Case II. R. W. (Register No. 25-908), a 60 year old Negro male, was admitted March 6, 1950, with the chief complaint of vomiting daily for about two weeks. This occurred 1/2 to 1-1/2 hours after meals and consisted of clear liquid and food which he had just eaten. His appetite had remained good. He also complained of frequent heartburn and sour eructations, but no abdominal pain. One week prior to admission, he had one loose, black tarry stool and since then had been constipated. There was no weight loss. He had no previous history of gastrointestinal disturbances.

Fig. 2.—Repeat barium meal eight days later. Six hour film no longer shows mass. (Compare with Fig. 1).

Systems review revealed nocturia three to four times and difficulty in urination for four to five months. He had recently developed frequency.

Physical examination was that of a well nourished and well developed male. His temperature was 99.4. Blood pressure was 190/120. His entire abdomen was tense and tympanitic but for the right upper quadrant, which was flat to percussion. There was a suggestion of fullness in the right lower abdomen. Rectal examination disclosed a moderately enlarged prostate gland with induration on the left.

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The hemoglobin was 11.6 grams with 4,150,000 red blood cells, 9,000 white blood cells and 81% neutrophils.

Urinalysis showed specific gravity 1.008, a very faint trace of albumin, and 3-4 red blood cells per high power field.

Barium meal examination (Fig. 3) on March 10th

Fig. 3.—Barium meal examination. Small bowel is bunched together and seen only on left side of abdomen.

showed no evidence of any intrinsic abnormality in the esophagus, stomach or duodenum, but for a smoothly outlined pressure defect on the greater curvature of the antrum, the pressure being present below and to the right of this portion of the stomach. The head of the barium column was in that portion of the small intestine overlying the left iliac fossa, being situated in the proximal ileum. That portion of small bowel visualized appeared bunched together and was seen only on the left side of the abdomen. The roentgen findings suggested the presence of a large lower abdominal mass, probably representing a retro-peritoneal neoplasm. Barium enema examination was advised but was not done.

Barium meal re-examination three days later for further study of the small intestine confirmed the previous findings and in addition, a smooth pressure defect was seen on the mesial surface of the small intestine in the left iliac fossa and apparent displacement of the cecum and ascending colon of the right (Fig. 4). Based on the experience of the previously reported case, the possibility of an enlarged urinary bladder was considered. Accordingly, the patient was instructed to void and a film taken immediately after this. The film still showed the findings as noted before.

Further physical examination on March 14th revealed a mass occupying the entire right abdomen and extending across both lower quadrants. The following day, the patient began vomiting continuously. The blood urea nitrogen was found to be 96 and the CO_2 to be 28 volumes per cent. The patient was voiding and on March 16th passed 350 cc. of clear, light, straw-colored urine. An intravenous pyelogram showed no contrast material in either kidney as late as three hours after injection. A large soft

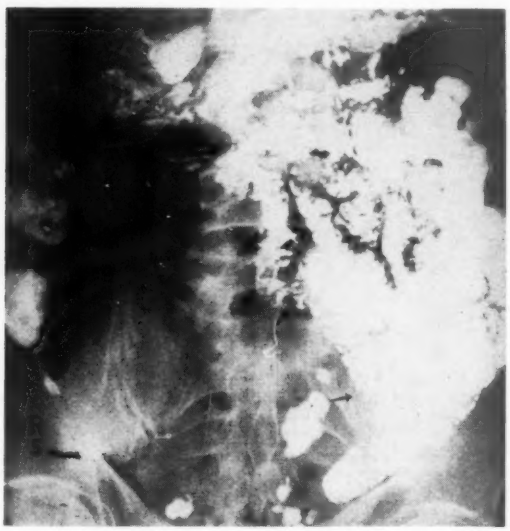

Fig. 4.—Repeat barium meal three days later. Smooth pressure defect on mesial surface of small intestine in left iliac fossa. Ascending colon and cecum appear to be displaced laterally.

tissue mass was seen in the bony pelvis. In view of the blood urea nitrogen, the abdominal mass, and the intravenous pyelogram, it was felt that the mass might represent a distended bladder. The patient was catheterized with difficulty and 2,000 cc. of clear urine was slowly released. The patient gradually improved and by April 3rd, the blood urea nitrogen had fallen to 28. A transurethral prostatic resection was performed April 6th. The histological report was that of benign prostatic hypertrophy. The patient was discharged April 18th in an improved condition. The patient returned for a follow-up

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July 18, 1950. A small intestinal study at that time demonstrated no abnormality.

SUMMARY

A distended urinary bladder can simulate a retroperitoneal or abdominal neoplasm causing displacement and pressure deformity of the stomach, the small and the large bowel. Films taken immediately after the patient has voided do not exclude a distended bladder, since residual urine is often sufficient in quantity to cause these findings. Two cases are presented as examples.

5012 Sargeant Road, Northeast.

Warn Against Promiscuous Use of More Than One Antibiotic.

Promiscuous use of combinations of antibiotics may result in one of the drugs deterring the effect of the other on a disease-causing organism.

Only if an organism proves resistant to a single antibiotic by laboratory test or adequate therapeutic trial should combinations of antibiotics be used, it was stated in a recent J.A.M.A. The report was made to the Council on Pharmacy and Chemistry of the A.M.A. by Dr. Ernest Jawetz and J. B. Gunnison, M.A., both of San Francisco.

They divided antibiotics into two groups: (1) penicillin, streptomycin, bacitracin and neomycin, and (2) aureomycin, chloramphenicol, terramycin and, possibly, sulfonamides. They said that a combination of drugs within either group will not antagonize each other and that simple additive effects from their multiple use are often observed. However, the combination of a drug in one group with one of the other group may interfere with the effectiveness of the drugs.

In addition, the report stressed the disadvantages of taking fixed ratios of mixtures of antimicrobial agents prepared by pharmaceutical firms. The reasons included the possibility that (1) such mixtures may enhance the development of drug sensitivities in the patient, (2) the dose relationships for parenteral administration are often incongruous, and (3) there is little, if any, objective evidence to indicate that the mixture is more effective in a specific infection than is an individual component.

XUM

THE USE OF MYANSIN (TOLSEROL)* IN BLACK WIDOW SPIDER BITE

MILTON ENDE, M.D.,
and
W. YOUNGBLOOD, M.D.,
Petersburg, Virginia

The purpose of this article is to demonstrate the effective use of myanesin (Tolserol) in black widow spider bite.

In 1947 Berger and Bradley[1] indicated the use of myanesin in order to produce muscular relaxation. Myanesin has subsequently been shown to be of value in the relief of spastic disorders, such as Parkinsonism[2], tetanus[3], backache, and cerebral palsy[4]. It has been used in anesthesia to promote abdominal relaxation for surgery. It has also demonstrated an euphoric effect in depressed states.

Although myanesin is a relatively safe drug, it may induce horizontal, vertical, or rotary nystagmus when introduced intraveneously. The patients occasionally complain of a "pin cushion" feeling. In order to obtain relief of symptoms it appears necessary to give the medicine intravenously. The duration of action of the drug is from 4 to 5 hours[5].

The bite of lactrodectus mactans (Black Widow spider) produces marked muscular spasm. Consequently, it was thought that myanesin could relieve this type of painful condition, although no previous report of such use has been noted. The exact mechanism as to how myanesin has this beneficial effect on the spinal cord and central nervous system is not known. The case described below demonstrates an excellent response on the part of the patient to myanesin after failing to obtain relief from morphine.

Case: A 22 year-old white male farmer was first seen 45 minutes after having been bitten on the penis by a Black Widow spider. He complained of back and leg pains, moderately intense. A skin test for anti-venom serum found him to be highly allergic, which ruled out that path of treatment. He was treated with 1/4 grain morphine. Hospitalization was advised, which was refused. The following morning, about 10 hours after the bite, he sought hospitalization. He was in agonizing pain. The morphine had given him no relief; instead, discomfort increased. Except for moderate abdominal spasm, the physical examination was negative. At this time he complained bitterly of back, leg and abdominal pain. Fifty c.c. of myanesin, 20mg./c.c. was given intravenously over a 5 minute period. The patient reported relief from pain even while the drug was being administered. Comfort remained for about 2 hours, whereupon the pain returned. The medication was repeated and again the patient found relief while myanesin was being given. He then went to sleep. He was judged asymptomatic the following day and was discharged.

*Drug—Furnished through courtesy of Squibb Company.

DISCUSSION

More than sixty preparations have been used in the treatment of arachnoidism. Most of the medications have not been too helpful[6]. Calcium gluconate appears to be of value; however, subsequent reports on the drug have not been as enthusiastic as when it was initially introduced. The antivenom does not stop pain and occasionally can not be used because of sensitivity of the patient. Neostigmine[7] was introduced by Bell and Boone. This drug appears to be effective, although in the case reported numerous other medications had been previously used. Morphine frequently does not give relief.

CONCLUSION

Myanesin offers a new and useful form of treatment, leading toward rapid relief from pain while the drug is being given.

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(3 - ortho-toloxy - 1, 2 - propanediol)

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Doctors' Incomes at All-Time High.

The average physician in private practice had a 1951 net income, before taxes, of $15,262—a rise of 35 per cent in four years according to *Medical Economics,* (December 1952), national business magazine for doctors. The magazine is publishing the results of a nationwide survey of medical practice, based on a questionnaire sent to each of its 134,000 M.D.-readers.

According to the survey, the average U.S. doctor is in a better financial position now than at any time in the past. But physicians' incomes are found to vary widely when regional and other breakdowns are made.

The farther West a doctor practices, says *Medical Economics,* the higher his income is likely to be. Thus, physicians in New England and the Middle East have the lowest incomes in the country, while those in the Far West have the highest.

Doctors' incomes tend to be highest in cities of 50,000 to 500,000, lowest in cities of more than 1 million. Of the ten largest U.S. cities, Cleveland and St. Louis show the highest physicians' incomes, and New York, Philadelphia, and Boston the lowest.

The magazine also found that incomes are generally highest among medical men with from ten to twenty years in practice. They're lowest among those with thirty or more years' experience.

New Books.

Below are listed some of the newer additions to the Tompkins-McCaw Library of the Medical College of Virginia, Richmond. These may be borrowed by our readers under usual library rules.

Arruga—Ocular surgery. 1952.
Benda—Developmental disorder of mentation and cerebral palsies. 1952.
Carmichael & Mead, eds.—The selection of military manpower—a symposium. 1951.
Cole & Puestow—First aid. 4th ed. 1951.
Davidson—Forensic psychiatry. 1952.
Gilbert—Understanding old age. 1952.
Hurst & Woodson—Atlas of spatial vector electro-cardiography. 1952.
Kaehele—Living with cancer. 1952.
Lanman—Modern trends in infant nutrition and feeding. 1952.
Lewis—Practical dermatology. 1952.
Litzenberg—Synopsis of obstetrics. 4th ed. 1952.
Meakins—The practice of medicine. 5th ed. 1950.
Rivers—Viral & rickettsial infections of man. 2nd ed. 1952.
Strauss, Ostow & Greenstein—Diagnostic electroencephalography. 1952.
Strong and Elwyn—Human neuroanatomy. 2nd ed. 1948.
Sugar—The glaucomas. 1951.

XUM

STEVENS-JOHNSON SYNDROME:
Report of a Case Treated with Aureomycin

JEAN F. WINE, M.D.,
Harrisonburg, Virginia
SIDNEY G. PAGE, JR., M.D.,
and
R. CAMPBELL MANSON, M.D.,
Richmond, Virginia

Erythema multiforme is an acute inflammatory disease characterized by bright or dark red symmetrically distributed lesions which may be macular, papular, nodular, vesicular or hemorrhagic. The idiopathic type as described by Herbra is a self-limited disease usually seen on the hands, forearms, face, neck and lower legs, which runs its course in two to four weeks, and may recur.

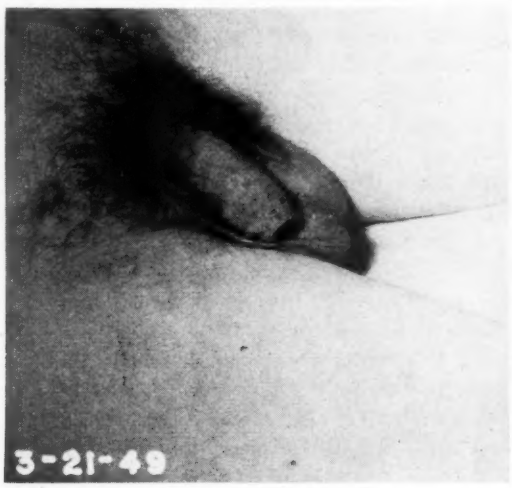
The systematic type is characterized by the same types of lesions and may be a manifestation of drug eruptions, serum sickness or toxemia of systematic diseases such as pneumonia, nephritis and gastrointestinal upsets.

Unusual and severe types of erythema multiforme defy classification. In this group the syndrome described as Stevens-Johnson disease (ectadermosis erosiva pluriorificialis) is of particular interest and is the subject of this paper.

Stevens-Johnson syndrome is an acute febrile disease of varying severity, usually characterized by erythema multiforme, conjunctivitis, balanitis and stomatitis. The mucous membranes of the nose, esophagus and anus may be involved also. The lesions involving the mucous membranes may be vesicular, bullous or ulcerative. Except for the fortunately rare complications of corneal ulcerations and resulting panophthalmitis, recovery is complete in a few days to a few weeks.

The etiology is unknown. Attempts have been made to isolate a causative virus, but have not been successful. Recent observations by Finland, Jolliffe and Parker[3], Anderson, Bolin, Sutow and Kitto[1], and Morgan and Finland[5] lend further support to this theory. Penicillin and sulfonamides have been used without success except possibly to decrease the incidence of ocular complications. Recently Church[2]

Before treatment.



After treatment.

and Lynas[4] each have reported the prompt recovery of a patient with Stevens-Johnson syndrome following the administration of aureomycin.

The literature on this condition was fully reviewed by Soll[6] in 1947, and readers interested in a more

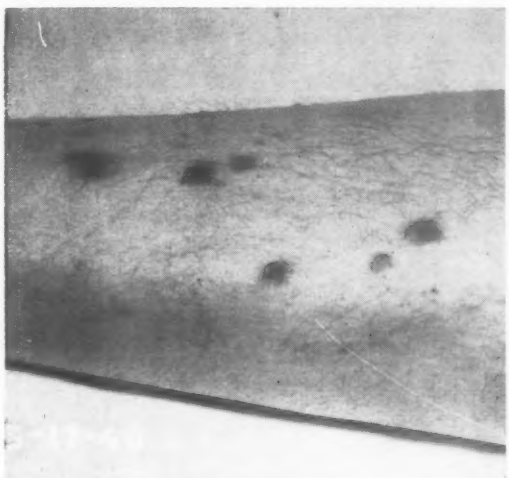
From the Medical Service, McGuire Veterans Administration Hospital, Richmond 19, Virginia.

Reviewed in the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the authors are the result of their own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

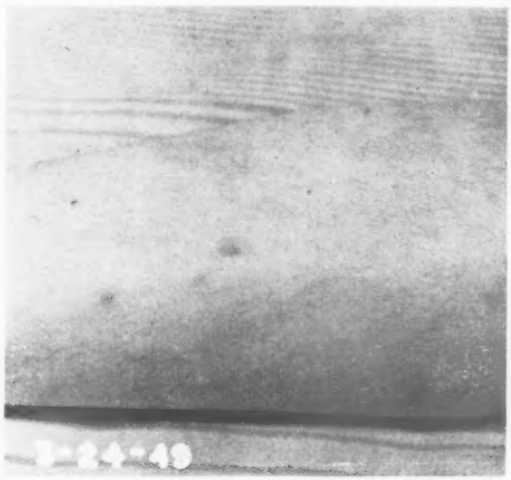
detailed account are referred to this source. This case is presented to demonstrate the result of aureomycin therapy in this disease.

HISTORY

C.A.E., a 32 year old single white male service station operator, was admitted to McGuire Veterans Administration Hospital, Richmond, Va., on March 14, 1949. One month previously he had been in bed for one week with fever, malaise and productive cough, and had gradually recovered without medication. One week before admission, the patient developed pruritus and inflammation of the glans penis. He applied "calgesic ointment" several times with relief from pruritus, but the inflammation became more severe with weeping, and spread to involve the prepuce and scrotum. On the second day he developed shallow ulcers on the lips, gums, palate and tongue, severe conjunctivitis, and red, discrete, pruritic macules on the forearms, thighs and buttocks. After appearance of the above lesions, he was given aspirin and penicillin without improvement. On at least one occasion his temperature reached 103°F. Because of progressive increase both in lesions and in severity of symptoms, he was referred to the hospital.



Before treatment.



After treatment.

PHYSICAL EXAMINATION

The temperature was 103°F., the pulse 120, and the blood pressure 120 mm. Hg. systolic and 70 mm. Hg. diastolic. The patient was a well developed and well nourished white male who appeared acutely ill. There was a severe bilateral conjunctivitis which did not involve the cornea. The lips were swollen and cracked and the mouth could be opened only slightly. There was desquamation and pseudomembranous exudate present on all areas of the tongue, gums, oral mucous membranes and pharynx that could be visualized. The prepuce and glans penis were swollen, red and weeping, and the skin of the scrotum was also red and swollen. There were sharply demarcated, erythematous, iris-like lesions, 0.5-1.0 cm. in diameter, many having hemorrhagic centers, on the extremities and buttocks. The palms and soles were not involved. The remainder of the physical examination was essentially negative.

LABORATORY STUDIES

The Kahn test was negative. The hemoglobin was 14.4 gms.%. The leukocyte count was 5,300 per cu. mm. with 68% neutrophils, 31% lymphocytes and 1% eosinophils. Urinalysis was negative. Routine agglutinations, including Weil-Felix agglutinations, were negative. Darkfield examination of serum from the penile lesion was negative. Blood culture was negative. The leukocyte count remained within normal limits throughout hospitalization. The roentgenogram of the chest was normal. Facilities for virus studies were not available.

COURSE IN THE HOSPITAL

The patient was given crystalline penicillin G, 200,000 units intramuscularly every three hours, boric

acid ophthalmic ointment, boric acid soaks to the genitalia, and hydrogen peroxide mouth washes for 48 hours without improvement. On March 16, 1949, the third hospital day, all therapy except boric acid ophthalmic ointment was discontinued and aureomycin therapy was begun. The patient was given 0.5 gm. aureomycin orally every hour for three doses, then 0.5 gm. every three hours for 5 days, a total dosage of 21 grams aureomycin. The next morning the patient felt better and some observers thought that the lesions were improved. By the following day, after 48 hours of aureomycin, there was marked improvement in all lesions and the patient generally felt much improved. His convalescence was uneventful and he was discharged from the hospital March 31, 1949, seventeen days after admission.

Before treatment.

After treatment.

COMMENT

The very prompt recovery following the institution of aureomycin therapy suggests that aureomycin could have been the responsible agent. Obviously no conclusions can be drawn from the study of only one case; however, we feel that further trial of aureomycin in the treatment of Stevens-Johnson syndrome is indicated.

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DR. WALTER REED, EPIDEMIOLOGIST—A PROFILE

EDWARD M. HOLMES, JR., M.D., M.P.H., F.A.P.H.A.,
JOHN E. PIPES, A.B., M.P.H.,
and
JAMES MCCULLOUGH, B.S., M.S.P.H.E.,
Richmond, Virginia.

It is rare that any one scientific achievement can be ascribed to any one person alone. The best that one can hope to have said of him is "he had a hand in the job". But to pay proper and rightly-deserved tribute to Dr. Walter Reed, it must be said that to this one man we must ascribe the achievement of solving one of the greatest mysteries of the scientific world. It is in tribute to him that we have prepared this profile.

The magnitude of Reed's work will long stand as a landmark in the history of man's effort in the conquest of disease. His name well deserves its place among the great men of science of the Nineteenth Century. Public Health workers associate Dr. Reed primarily with the science of epidemiology and link his accomplishment, the solution of the mode of transmission of yellow fever, with the accomplishments of Dr. John Snow of cholera fame; Pasteur of rabies and anthrax; Dr. William Budd, whose work in typhoid fever opened the way to the ultimate control of the disease; with Koch of tuberculosis; Ehrlich of syphilis; and Theobald Smith of Texas fever.

Virginians take pride in his work and in the fact that three of its native sons, Dr. Reed, Dr. Henry Rose Carter, and Dr. Wade Hampton Frost made epidemiological contributions that paved the way for the control of many of the communicable diseases. The work of these men played a major role in the formalization of the natural history of disease. Their contributions also aided in the establishment of the epidemiological principles which later scientists so successfully applied to the control of communicable diseases.

Dr. Reed was born at Belroi, Gloucester County, Virginia, the son of the Reverend Lemuel Sutton Reed and Pharaba White Reed. His father, the son of a North Carolina planter and a descendant of Sir Christopher Reed of Chipchase Castle on the Tyne, was born near Roanoke Sound in North Carolina. He became a minister of the Virginia Conference of the Methodist Episcopal Church, South, and worked diligently throughout his life in the cause of Christianity. It was said of Reverend Reed that he was the very soul of honor and that his name was the synonym for integrity, uprightness, fair dealing and manly bearing. His influence on his family and on his son, Walter, was profound. From him, Walter Reed inherited his force of character, his self-discipline, his love of knowledge, and his keen sense of humor.

Little is known of his mother except that she was the daughter of a North Carolina planter of English extraction. She was born on a plantation in the vicinity of Roanoke Sound, North Carolina. Biographers of Walter Reed have all agreed that she was a most gentle person, with a keen desire for knowledge and that she assumed, as was the custom of the day, the duty of educating her children during their early years.

The family moved to Farmville shortly after Walter Reed's birth, and it was there that he started his early education in a private school. Nine years later, his father received a call to Charlottesville, Virginia, where he placed Walter under a private tutor, the schools of the area being closed in this period. As a young man, Walter Reed was most precocious, and he entered the University of Virginia at sixteen, where he spent one year in the Academic Department and one in the Medical School, to graduate in 1869 the youngest man ever to receive his doctorate of medicine at the University!

He was one of the first physicians of his day to realize the importance of an internship, and he entered Kings County Hospital, where he embarked upon the arduous duties of interning. Later he worked in medicine in several of the hospitals and received an appointment as District Physician to one of the poorest slum districts of New York. Here he came face to face with the reality of human suffering. Placed among the lowly and the destitute, he acquired the devotion to the suffering of mankind that was in later years to give him his great understanding and tolerance. At the age of twenty-two

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he was promoted to be one of the five inspectors of the Borough of Brooklyn Board of Health. In that period, in metropolitan New York, an inspector was in reality a combination physician and sanitarian who devoted his time to the control of communicable diseases and epidemics. It was here that he received his first public health training, an experience which was later to prove invaluable.

After two years in this position, he was compelled to make a momentous decision—whether to spend his life in administrative medicine or to seek success in general practice. In this period, success in general practice was, to a large degree, dependent on social connections, the possession of wealth and influential friends. Brilliant though he was, he had very few connections among the successful physicians of the day. Accordingly, he decided to join the Medical Services of the Army of the United States.

It is reported that he believed he could find financial security and engage in scientific research and, at the same time, serve humanity as an Army physician. Among his papers is the terse statement that he believed the acceptance of a commission would afford him an opportunity to rise quickly in his profession so that his sweetheart, Amelia Lawrence, would think well of him. In June, 1875, he was commissioned Assistant Surgeon with the rank of First Lieutenant.

The next eighteen years of his life were spent as a garrison surgeon. It was during this period, April 25, 1876, that he married his sweetheart, Amelia Lawrence, of Murfreesboro, North Carolina. Miss Lawrence, a person of great kindness, was to follow him to the frontier and experience with him the hardships encountered in this rawest of civilizations and later was to share with him the fulfillment of his life's dreams.

It was also during this period that his two children were born; the first, Walter Lawrence Reed, was born December 4, 1877, at Fort Apache; the second child, Emilie Lawrence Reed, was born July 12, 1883, in Western Nebraska. Little is known of his life during these years. He had fifteen changes of station, was reported to be a most efficient officer, and to be devoted to his work. During this interval in 1881, he was stationed at Fort McHenry in Baltimore. He spent as much time as possible in postgraduate study at the Johns Hopkins University. It was this experience which awakened an interest in research.

After two changes of station, he again returned to Baltimore in 1890 for duty. This assignment was most profitable because the faculty of the Johns Hopkins Hospital, stimulated by the work of Pasteur, Koch, and Ehrlich in Europe, was pioneering in a new concept of medical education. Under the enthusiastic and capable leadership of Dr. William Henry Welch, Dr. John Miller Turpin Finney, Sir William Osler, Dr. William Stewart Halstead, and Dr. Howard Atwood Kelly, Hopkins was embarking on the laboratory phase of medical research, and great emphasis was being placed on biochemical and biophysical studies.

No doubt, the enthusiasm of the faculty and preceptors was contagious and influenced Dr. Reed in a most profound manner. He always had a deep-seated interest in research and plunged into the medical studies being conducted at the institution with enthusiasm. It was here he received his basic training in pathology and bacteriology. In these surroundings, he acquired a familiarity with technical methods and became acquainted with the various organisms thought to be the cause of specific diseases. This knowledge was later to help him solve the mystery of yellow fever.

Leaving Baltimore in 1891, Dr. Reed, by now well trained in laboratory medicine, was assigned for a brief period to a western station. After this tour of duty, he was then assigned in 1893 as Curator of the Army Medical Museum and served as Professor of Bacteriology and Clinical Microscopy in the Army Medical School. Garrison life for Dr. Reed, who was now a Major, had finally ended.

It would be difficult to say at exactly what point Walter Reed became an Epidemiologist, but it is highly probable that it was his assignment as Professor of Bacteriology in the Army Medical School which was the turning point. Epidemiology in this period was just beginning to be formalized. Physicians and laboratory workers were studying the principles of contagion that we now know so well as the factors governing the spread of disease. These factors, commonly referred to as the specific causative organism, the susceptible individual, the reservoir of infection and the mode of transmission of the organism, were at this period challenges to the inquisitive research mind.

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Current dictionaries briefly and tersely define Epidemiology as "the Science of Epidemics". The American Epidemiological Society states that it is "the Science which concerns itself with the natural history of disease as related by some common factor of age, sex, race, location or occupation, as distinct from the development of disease in individuals". The late Dr. Wade Hampton Frost, Professor of Epidemiology of Johns Hopkins School of Hygiene and Public Health, for his students in advanced Epidemiology, defined it as "the Science which will give, firstly, a picture of the occurrence, distribution and the types of the diseases of mankind, in distinct epochs of time and at various points of the earth's surface, and, secondly, will render an account of the relations of these diseases to the external condition surrounding the individual and determining his manner of life". In brief, it is the study of conditions known or reasonably supposed to influence the prevalence of disease.

From his first introduction to public health work as a District Inspector in the Borough of Brooklyn, Dr. Reed rapidly developed the characteristics necessary to become a practical epidemologist. He possessed the same characteristics of insatiable curiosity as did Dr. John Snow, who, in 1849, published a treatise on "The Mode of Communication of Cholera". Snow's work was based on his first-hand observations concerning the mode of spread of the disease and principles governing its prevention. The work is reported in as detailed a manner as had ever been applied to a disease investigation.

In 1857, only 42 years prior to Dr. Reed's report on yellow fever, Dr. William Budd, a Fellow of the Royal Society, published his most brilliant treatise on typhoid fever, a treatise in which he discussed the natural spread and the methods of prevention of the disease in a period prior to the formalization of the science of bacteriology. Reed, like these men, had the attributes necessary to achieve distinction as an epidemiologist. For what is an epidemiologist but a creature who is skeptical and curious, obsessed with the desire for the truth, and who has not only the ability to recognize new phenomena when faced with them, but who—above all—has sufficient energy and patience to put together all of the pieces of an epidemiologic pattern?

Between 1893 and 1900, the most important work done by Dr. Reed was the investigation of typhoid fever in army camps during the Spanish-American War. From an epidemiological viewpoint, this investigation was a remarkable achievement. The details collected and the ingenious approach to the problem go without comparison. His paper, "Report of the Origin and Spread of Typhoid Fever in the United States Military Camps During Spanish-American War of 1898", is in essence the whole theory of the typhoid carrier. He also worked in the field of typhus fever, malaria, smallpox, and sanitation problems, and his reports have enriched the literature.

The die of an epidemiologist had now been cast. The entire previous experiences of Dr. Reed were now to be brought to focus on the momentous task ahead —the scourge of Yellow Fever.

One of the first authentic records notes yellow fever as being in Central America as early as 1596. Then follow innumerable reports placing it throughout the world in varying degrees of intensity. Between 1702 and 1800 the disease appeared in the United States 35 times. From 1800-1879, it visited the country at some point every year but two. In 1702 there was an epidemic in New York with 570 deaths. New York at this time had a population of only 16,000. It again struck the same city in 1743 with 217 deaths.

Perhaps the worst epidemic experienced by a city in this country was that in New Orleans, Louisiana, in 1853. There were 29,020 cases with 8,101 deaths. It appeared in Norfolk, Virginia, in 1855, with over 10,000 cases and 2,000 deaths among the city's 16,000 population. It is reported that over one-third of the city's white population succumbed. Portsmouth, Virginia, across the river from Norfolk, had three to four thousand cases. Twenty-five years later, it struck Memphis, Tennessee, causing 17,600 cases with 5,150 deaths. The disease is recorded as showing a preference to the southern states and tropical and sub-tropical countries. In places above the frost line, the onset of winter brings about a reduction in the number of yellow fever cases In Havana, Cuba, yellow fever had been recorded as being endemic since 1648, sporadic cases occurring every month in every year, with occasional large epidemics in particularly bad summers.

The cause of this scourge to the human race was accepted until 1793 as a visitation from God. At this time, there sprang up different schools of thought

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as to its cause and spread. One theory, supported by many medical groups including the College of Physicians, was that it was spread by contagion of direct importation. Another belief was that the epidemics were of local origin due to spontaneous generation under appropriate climatic conditions. This was probably the beginning of the theory of contagion and non-contagion. In the succeeding years, several theories were expounded on the cause and transmission of yellow fever. Some were downright fantastic and, in retrospect, amusing. A fungus plant, as yet undiscovered, was blamed, as was fermentation. The majority, however, subscribed to the miasma theory.

In 1878, the theory of fomites as the source of contagion was gaining in popularity. This theory held until 1897 when Dr. Guiseppe Sanarelli announced his discovery of the *bacillus icteroides* as the cause of yellow fever. There were those who thought that now, since a definite organism was discovered, yellow fever could be easily wiped from the face of the earth.

Dr. Sanarelli's announcement caused quite a stir and resulted in General Leonard Wood taking immediate action by issuing an order to the effect that Havana and all of Cuba would be sanitated to the point where all towns would be cleaned as if they were scrubbed. General Wood had good reason to effect this order, for at that time he was aware of the fact that yellow fever was killing one in three of the American troops stationed in Cuba and had accounted for a greater toll of life than had Spanish bullets.

Dr. Reed's interest in this disease heightened when he and Dr. James Carroll examined 24 cases of yellow fever and performed 11 careful autopsies and could not find the *bacillus icteroides* present in the blood of the sick or the blood or organs on postmortem examination. From this, they concluded that this organism had no special relationship with the disease. Immediately following this demonstration, Dr. Reed was appointed to head a commission to investigate the cause and mode of transmission of yellow fever.

The Yellow Fever Commission, headed by Dr. Reed, and consisting of Dr. James Carroll, bacteriologist and pathologist, Jesse Lazear, entomologist, and Aristides Agramonte, bacteriologist, was requested by the Surgeon General on May 23, 1900. On May 24, the Adjutant General created the Board and on the morning of June 25, 1900, Dr. Reed and Dr. Carroll landed at Havana, Agramonte and Lazear having preceded them.

The afternoon of June 25 was a momentous time. This was the Commission's first meeting. It was the meeting that signed the death warrant of yellow fever. At this meeting, it was agreed that Dr. Reed would supervise all the work, and the other members would do the specialized work for which they were trained. It was agreed that they would investigate further and obtain conclusive proof as to the theory of the *bacillus icteroides* relationship to the disease. This they did. They ruled out this organism beyond doubt. They showed this organism to be of the hog-cholera type and only a secondary invader in yellow fever.

On that hot June day, when Reed was brought face to face with yellow fever, he made several pertinent mental notes which were later to be keys to the puzzle: (1) Patients were being attended by non-immune persons without contracting the disease; why, he wondered, didn't they get the disease by handling these patients? (2) This disease wasn't contracted under circumstances such as those associated with typhoid and other communicable diseases. Inquiries further showed that the disease had not been contracted in hospitals during earlier epidemics when the disinfection of articles of clothing and bedding was unknown. (3) He observed that patients returning to companionship with comrades during early convalescence did so with no apparent danger of establishing a fresh foci of the disease. This, he thought, wasn't in keeping with the presence of the specific agent in excreta of the convalescent carrier, of which he knew so much from his work in typhoid. Even in the laboratory he could find no growth on ordinary media. (4) His belief in fomites, if ever he possessed any, was forever shaken when he observed that a person who had slept in a bunk after a patient died of yellow fever did not contract the disease. (5) He observed that the disease would strike a person in one house, hop around the corner and strike someone in an unrelated household, then jump across the street and strike another, only to return to the first house and snuff out the life of another member of the family—this without any association whatsoever between the different persons involved. This, he recorded, wasn't in keeping with

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the idea of a diffusible poison or miasma carried by the atmosphere.

After making these recordings, he reviewed them in a thorough and logical manner and placed them in their proper order. To these he added the following notes: Here was a disease which had never been demonstrated to be spread by contaminated water; a disease that demanded an elevated temperature before progressing; a disease that was not spread by contagion, direct or indirect; a disease which no previous hygienic measures could arrest; a disease that did not affect crews of ships lying off shore; a disease which was promptly controlled by frost.

His searching mind then recorded, "What disease, other than malaria, can you associate with these criteria?" The time now had arrived to make a decision—whether to search for the cause of this disease or the method of its propagation? The members of the Commission were all aware that insects would serve as intermediate host for certain diseases. The vector theory had been amply demonstrated by several investigators. Patrick Manson, in 1880, showed that a certain kind of mosquito spread elephantiasis. In 1893 Theobald Smith demonstrated the tick to be the intermediate host of Texas Cattle Fever, and, in 1898, the mosquito was shown by Ronald Ross to be the transmitter of malaria.

In 1881, Dr. Carlos Finlay, of Havana, had suggested the mosquito as being guilty of transmitting yellow fever. He went so far as to classify the guilty mosquito and to give the condition under which yellow fever could be propagated. The Commission, having heard of Dr. Finlay's work, called on him and at his insistence, accepted his gift of a little box of larvae of the mosquito he believed spread the disease, the *Stegomyia fasciata.*

At this time, the Commission received a paper by Dr. Henry Rose Carter, of the Marine Hospital Service, showing that even though the incubation period of yellow fever appeared to be only five days, the place or surroundings of the patient didn't become infected until 15 to 20 days. Dr. Carter was a Virginian, born in Caroline County, and educated at the University of Virginia, where he graduated in engineering in 1873. He took his doctorate in medicine at the University of Maryland and became one of the foremost sanitarians and epidemiologists of the century.

To Dr. Reed, the epidemiologist, this discovery of Dr. Carter's could mean only one thing: there was a hidden phase of the incubation period, and from Dr. Carter's report, he decided that the lag phase could be in the body of an insect, wherein the organism had to "ripen".

It was just a guess—a wild theory. But this theory was bolstered when he observed a soldier who, under guard and without contact whatsoever with yellow fever, came down with the disease and died without the guards contracting the disease. To Dr. Reed and his fellow-workers, it looked as though the fever "flew in on the wings of an insect and then flew out".

As all observations pointed to the presence of an intermediate host, it became apparent that in this climate, a mosquito would be the most logical vector. Thus, the decision to search for the mode of propagation received further justification by Dr. Carter's work.

Therefore, it was agreed that the method of attack would be that of seeking the mode of transmission. They would prove or disprove the mosquito theory. But to do this, human beings would be needed for the experiment. Animals wouldn't do—Dr. Agramonte had shown that. But to expose humans to the disease would be dangerous. It would call for complete submission to the possibility of death. What would be the reaction of the Army and the public? The Commission decided to try to experiment on themselves and early in August the experiment was started with great secrecy with the feeding of mosquitoes on the blood of patients with yellow fever.

This was not an authorized experiment—not in the sense that they could risk the lives of human beings to gain an unknown end. Dr. Jesse Lazear and seven soldiers volunteered. The first experiment was made August 11, and all of the volunteers were bitten by infected mosquitoes. But the experiment was unsuccessful; they remained robustly healthy. On August 27, while Dr. Carroll and Dr. Lazear were discussing their failure, they took a mosquito which had 12 days previously fed on a yellow fever patient only two days after the person had developed the disease and allowed the insect to bite Dr. Carroll. Also bitten at this time was a soldier who volunteered and is recorded in the history of the experiment only as being "Case XY". (He was later established as being William Dean of Grand Rapids, Michigan.)

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Three days later, Dr. Carroll was in bed. The first case of yellow fever had been produced in a human experimentally. A few days later, the second volunteer, XY, became a patient. Both recovered. Despite the fact that Dr. Carroll and the patient known as XY acquired the disease after being bitten by a mosquito who had fed on the blood of patients ill with the disease, Dr. Lazear did not consider this to be conclusive, nor did he feel that it was irrefutable proof, for he was aware of the fact that during the supposed incubation period, Dr. Carroll had been in contact with cases of yellow fever in the course of his ward rounds, and there was some doubt as to whether the volunteer, XY, had been in contact with the patients.

These notes he made in his diary and also recorded the fact that the mosquito which caused the infection was the one which had fed on the patient during the second day of his illness and was not allowed to bite the victim until the 12th day. This diary was later to give the answer to one of the problems which was bothering Dr. Reed.

It is recorded by many authors that on September 13, while collecting blood from yellow fever patients for study, Dr. Lazear was accidentally bitten by an unidentified mosquito. He contracted yellow fever and on September 25, he became the first and only death to result from these first experiments. It is agreed that there were 9 failures and 2 successes, and only 1 death. The 2 experimental successes and 1 death were enough to incriminate the mosquito. But why, he asked, did we fail in the 9 cases?

Once again the brilliant, searching mind found the answer. Scrutinizing the diary left behind by Dr. Lazear, Reed noticed that the experimental cases of yellow fever were produced by mosquitoes fed on patients in the first two days of illness, and that these mosquitoes had not been used until at least 12 days after the feeding. This, thought Reed, would account for that hidden phase of the incubation period. It would also account for the failures in the first seven volunteers. To Dr. Reed, it meant that the mosquito could pick up the infection only from a yellow fever patient during the first few days of illness, and that once the insect had it in its body, the organism had to remain there in some state for at least 12 days before it could be transmitted to a new patient. Thus, an age-old question was answered—answered in a dead man's diary.

On October 15, Dr. Reed released a preliminary circular in Havana announcing the mosquito as spreading yellow fever. The circular was most conservatively written and called for immediate sanitary control measures. Dr. Reed was aware that to obtain conclusive proof that the mosquito was the intermediate host would require further experiments, and that those experiments would have to be indisputable. Every step had to be under scientific control at all times. But this would require money. It would require specially-designed facilities. More important, it would require more human beings as volunteers. The Army had originally appropriated $8,000 to finance the Commission. Where were the funds to come from—who would allow military personnel to volunteer for such experiments?

Almost in desperation, Dr. Reed applied for permission to use non-immune volunteers. It is probably most fortunate that General Leonard Wood, Governor General of Cuba at the time, was a doctor and thus sympathetic; for he endorsed Reed's request for both volunteers and money. The liberal sum of $10,000 was approved for rewarding these individuals who would risk their lives for the cause of science. In discussing the use of volunteers with Reed, Dr. G. M. Sternberg stated that some of the things wouldn't be covered in the orders—"If the Antivivisectionists got hold of the news that we were prepared even for human experimentation, as a last resort, they'd scream themselves hoarse!!"

At Camp Lazear, named after their dead colleague, near Quemados, the second series of experiments were started in early November. The study program called for three phases, each a specific experiment, and required that every phase was at all times to be carried out under the most rigidly controlled scientific procedures. The first phase would be the infection of non-immune patients by the bite of a mosquito at the will of the experimenters. The second phase would be to use fomites in attempting to infect non-immunes. The third phase would be the injecting of blood from yellow fever patients into non-immunes to produce the disease.

A call for volunteers was made. Records are not consistent as to the number who responded, but a sufficient number was secured to carry to completion all three of the experiments. Each volunteer was offered $100, and if he contracted the disease, he was to get $200. No promise was made in case of

death, although each was told of the risk he was taking. The first two volunteers, both young privates from Ohio, John R. Kissinger and John J. Moran, came "not for money but for interest in humanity and science". The others were all soldiers of the United States Army—brave men! They were followed by more brave men, men who wanted the exciting chance to prove humans could be used in experiments. Some came out of a sense of adventure; all came out of their love and respect for this humble man.

Mosquitoes to be used in the experiment were bred from eggs under rigid control. The insects were housed in buildings screened with wire netting. When one was wanted for experimental purpose, it was carefully removed from its cage and handled with the utmost care. Mosquitoes would be allowed to bite patients with yellow fever at varying stages of their sickness. Then at varying intervals, they would be allowed to bite the non-immune. This data was to be carefully recorded. This phase is well documented and the results are recorded in history.

To eliminate fomites as a mode of spread was a bit more complicated. Into the specially-screened and designed huts went young Dr. Robert Page Cooke* and two soldiers, Folk and Jernigen. Shortly thereafter they were delivered bundles of soiled linen, bed clothing, and personal garments soiled by the body discharges of patients dying of yellow fever. In the stifling heat, they disrobed, donned the contaminated clothing, made their beds with the soiled linen, and remained in the quarantine zone for a period of 15 days. The Commission was pleased that none of them came down with yellow fever.

The third phase of the experiment consisted of injecting blood from yellow fever patients into four volunteers; each came down with the illness.

From these experiments came the conclusive proof for which Dr. Reed was searching. Ten cases of yellow fever were produced experimentally under controlled conditions by the bite of the mosquito. Four cases were produced by blood from a yellow fever patient. No cases were produced by fomites, but the non-immunes exposed to fomites were later infected by the mosquito.

Before Walter Reed left Cuba and as the end of December, 1900, drew near, when he was drawing up his final report, it must have given him great satisfaction to review his orders. The Surgeon General's charge to the Commission on May 24, 1900, was: "You will naturally give special attention to the etiology and the prevention of yellow fever". This was the challenge. Dr. Reed's reply of January 2, 1901, was: "The mosquito serves as the intermediate host of yellow fever".

After 50 years the magnitude of this work is still impressive, but we may be inclined to forget the logic and the thoroughness of the man who directed the work and who ultimately achieved the solution to a disease problem which was costing one of the higest tolls in human lives and wreaking economical havoc to the states and countries of the tropical zones. There is no doubt that had yellow fever not been brought under control, the Panama Canal would not have become a reality; two previous attempts to build the Canal failed because of the scourge of this disease.

In this day and age when it is not unusual for sums in excess of one million dollars to be appropriated for research in one specific disease, one cannot help but be impressed with the fact that the mystery of the cause and mode of transmission of yellow fever was solved for a sum slightly in excess of $18,000.

As time goes on we are perhaps inclined to forget the epidemiological procedures and the steps of the investigation that gave us a solution to this disease problem. Before Dr. Reed started to work, he most carefully reviewed all of the existing information and mis-information on the disease.

We can best recall the steps of the investigation by reviewing his report to the Pan-American Congress in 1901. In this brief report he reviewed his work as follows:

"1. The mosquito, S. fasciatus, serves as the intermediate host for the parasite of yellow fever.
2. Yellow fever is transmitted to the non-immune individual by means of the bite of the mosquito that has previously fed on the blood of those sick of the disease.
3. An interval of about 12 days or more after contamination appears to be necessary before

*Dr. Cooke was a native Virginian and only recently retired as health officer of the Lexington-Rockbridge County Health Department. He was one of the two surviving members of the experiment. The other is Mr. James Hanberry, of Orangeburg, South Carolina. Dr. Cooke died Oct. 27, 1952.

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the mosquito is capable of conveying the disease.

4. The bite of the mosquito at an earlier period after contamination does not appear to confer any immunity against a subsequent attack.
5. Yellow fever can also be experimentally produced by the subcutaneous injection of blood taken from the general circulation during the first and second days of this disease.
6. An attack of yellow fever, produced by the bite of the mosquito, confers immunity against subsequent injection of the blood of an individual suffering from the non-experimental form of the disease.
7. The period of incubation in 13 cases of experimental yellow fever has varied from forty-one hours to 5 days and 17 hours.
8. Yellow fever is not conveyed by fomites, and, hence, disinfection of articles of clothing, bedding, or merchandise, supposedly contaminated by contact with those sick with this disease is unnecessary.
9. A house may be said to be infected with yellow fever only when there are present within its walls contaminated mosquitoes capable of conveying the parasite of this disease.
10. The spread of yellow fever can be most effectually controlled by measures directed to the destruction of mosquitoes and the protection of the sick against the bites of these insects.
11. While the mode of propagation of yellow fever has now been definitely determined, the specific cause of this disease remains to be discovered."

In the subsequent search for the cause of yellow fever, the idea of a filterable virus was suggested to Reed in the summer of 1901 by Professor William H. Welch of the Johns Hokpins University, and Dr. Carroll was dispatched to Cuba that same summer to test this theory. His experiments were eminently successful, demonstrating that the blood of yellow fever patients, after passing through a Berkefeld filter, is still capable of conveying the disease when injected into a non-immune.

The practical effect of Walter Reed's work may be summarized in his own words, "I may say that counting from the day when they (the new sanitary regulations) were put into force, *viz.*, February 15, 1901, Havana was freed from yellow fever within ninety days; so that from May 7 to July 1, a period of 54 days, no cases occurred". Between the years 1853 and 1900 there had been recorded in the City of Havana 35,952 deaths from yellow fever.

Then, just before the dawn of the new year, 1901, a year before his death, these words were penned to his wife, "that I might be permitted in some way or at some time to do something to alleviate human suffering has been granted". A dedication—a prayer come true.

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PR Tip of the Month

Dr. Michael Shea of New Haven, Connecticut offers this public relations suggestion. "When I receive a check from Connecticut Medical Service or some other voluntary health insurance agency, *I send a receipt to the patient thanking both the agency and the patient for the payment.*" Dr. Shea considers this friendly gesture an inexpensive, but worthwhile PR practice. (THE PR DOCTOR) June 6, 1952

XUM

CLINICOPATHOLOGICAL CONFERENCE

Presented at the annual meeting of The Medical Society of Virginia, in Richmond, October 1, 1952.

PROTOCOL OF CASE FROM THE UNIVERSITY OF VIRGINIA

Clinician: EDWIN L. KENDIG, JR., M.D.

Pathologist: J. F. A. MCMANNUS, M.D.

The patient was a 10½ year old white female.

CC: Headaches and joint pains, off and on for several years.

PI: At age 6 years she suffered with headache, fever, and pain in the abdomen, ankles and wrists. She was treated (but not examined) with "pain pills" and convalesced very slowly, never seeming to get entirely well.

At age 8 years she had a similar episode and was in bed three weeks.

One year before the present admission, at age 9½ years, she had a third similar illness and was in the hospital for one month. Generalized edema, pyuria, and enlargement of the heart were noted.

Since that time, a period of ten months, she had been on greatly reduced activity at home, with occasional paroxysmal nocturnal dyspnea and slight orthopnea. Five weeks before admission she again had fever, swollen and tender hands and feet, and pain in her chest and abdomen. In another hospital she was treated with penicillin, blood transfusions, and cortisone. She responded well at first, but later developed an upper respiratory infection and a joint flare-up. The cortisone was increased. She became quite dyspneic and was digitalized and given oxygen for several days. (The fact of digitalization was not known until 4-5 days after this admission.)

OTHER HISTORY: Insignificant. An uncle and a brother had diabetes.

PE: Examination showed a well developed and nourished young white girl in no particular distress, but seeming chronically ill. Temperature 101 (p.o.), pulse 130, respirations 20, blood pressure 110/50. Weight 57 lbs. The face appeared puffy. The cardiac apex was in the mid-axillary line in the 6th space. There was no pulse deficit. P_2 was greater than A_2. A Grade IV harsh systolic murmur was heard over the left precordium, loudest at the apex and transmitted to the axilla and neck. A soft diastolic murmur was heard at the apex and in the back near the vertebral column. The liver edge was palpable 1-2 cm. below the costal margin. There was slight tenderness in both upper quadrants and both flanks. The ankles and wrists seemed slightly tender. No definite edema was noted.

LABORATORY STUDY: The urine was alkaline with a specific gravity of 1.014; otherwise it was normal. The hemoglobin was 12.5 grams, the red cell count 4,000,000, and the white cells 11,200, with 5 bands, 55 segs., 30 lymphs., 8 monos., 1 eosinophil, and 1 basophil. The corrected sedimentation rate was 22.5. The hematocrit was 34%. The tuberculin test was negative in forty-eight hours. Five blood cultures were sterile. A urine culture showed a hemolytic staphylococcus and culture of the throat grew micrococci and streptococcus viridans. The electrocardiogram showed sinus tachycardia, a vertical heart, and left ventricular strain with a suggestion of left ventricular hypertrophy. By x-ray the heart was greatly enlarged with a cardio-thoracic ratio of 66%. A faint left auricular shadow was visible through the main heart shadow. The lungs showed early perihilar congestion.

COURSE IN THE HOSPITAL: The temperature varied from 100-103 with the pulse 100-130. The blood pressure remained stable. She was put on a low-salt diet and given thiomerin, 1 cc., without diuresis. On the third day she began complaining of severe chest pain. A pericardial friction rub was then heard to the left of the sternum. She was given aspirin, .65 grams five times a day. The fever promptly dropped to normal and the patient felt much better. For the rest of her life the temperature was about 100° but the pulse continued to zigzag between 80 and 140. Save for slight nausea the child did well until the evening of the 10th day when she complained of dyspnea. This grew worse through the night and the next morning her pulse was 126 and respirations 34. She was put in an oxygen tent and given 0.2 mg. digitoxin and 25 mg. demerol. That night she became more restless and dyspneic, despite sedation. She was given an aminophylline

suppository and more thiomerin. At midnight she became cyanotic and was coughing up blood; she was given 0.2 mg. digitoxin again. She did not improve, despite 6 mg. morphine; the dyspnea became worse, she became unconscious, and died at 4:00 A. M. on the 12th hospital day.

DISCUSSION BY DR. EDWIN L. KENDIG, JR.

In brief, this is the story of a 10½ year old white girl who, beginning at 6 years of age, had 3 episodes of headache, fever and pain in the abdomen, ankles and wrists. With the last recurrence, one year prior to admission, she had generalized edema, pyuria and an enlarged heart. She never completely recovered and 5 weeks before the present admission she had another episode, similar to the first two though apparently more severe, requiring hospitalization and treatment with penicillin, blood transfusions, cortisone and finally digitalization.

At the time of this admission there was slight fever (101°), rapid pulse (130), some tenderness of ankles and wrists and of both flanks and upper quadrants. The liver edge was palpable 1-2 cm. below the costal margin. The heart was generally enlarged and there was a harsh grade IV systolic murmur over the left precordium, loudest at the apex and a soft diastolic murmur at the apex and at the back near the vertebral column. X-ray showed gross cardiac enlargement with faint left auricular shadow visible through the main heart shadow and EKG showed left ventricular strain with suggestion of left ventricular hypertrophy.

The hospital course was steadily downhill. The patient developed severe chest pain, relieved by aspirin, and a pericardial friction rub on the third day. She became cyanotic and coughed up blood 4 hours before she finally died on the 12th hospital day.

Let us consider the protocol. The story is almost typical of rheumatic fever. The 10½ year old white girl had her first episode at 6 years of age. This is one of the age periods during which rheumatic fever is most common. The described illness, consisting of headache, fever, pain in the abdomen, ankles and wrists, is typical of an attack of rheumatic fever. The protocol does not tell how long the first acute phase of the illness lasted, but it does say that she never got completely well until the second acute phase, lasting 3 weeks, occurred. One of the most typical points about rheumatic fever is that the patient so affected may never seem completely well and an erythrocyte sedimentation rate taken during one of the periods of supposed remission will be elevated, indicating activity of the disease. There was probably cardiac involvement long before the third attack, but at least by that time it had become unmistakably apparent and the presence of edema indicates that the heart had begun to fail. No mention is made of the type or degree of cardiac enlargement and no mention is also made as to the presence or absence of cardiac murmurs. One may readily suppose that if rheumatic fever was present, rheumatic heart disease had made its appearance well before this time and mitral regurgitation was probably present.

Pyuria, itself, is not generally considered to be part of the rheumatic fever syndrome and most observers feel that its frequent occurrence at time of acute episodes in children with rheumatic fever is a result of the same acute respiratory infection which has activated the rheumatic process.

When the fourth and final episode of the disease occurred 5 weeks before hospital admission at the University of Virginia Hospital, the same typical syndrome was encountered. This time cortisone was used and appeared to be effective until an acute upper respiratory infection caused a joint flareup necessitating increase in cortisone dosage. It is well recognized that cortisone has been a useful adjunct in the treatment of the acute phase of rheumatic fever. Whether or not its use does anything to shorten the course or lessen the severity of the infection is, as yet unanswered and opinion is divided on this point. Cortisone does, however, seem to aid considerably in making an acute attack less severe. Further, it is well recognized that acute respiratory infections tend to activate rheumatic fever.

The heart murmurs described seem to fit those of mitral insufficiency and either mitral roughening or mitral stenosis, the most probable valvular lesions in childhood. If these same murmurs were present in an adult, one would be certain that mitral stenosis existed. In children, however, a diastolic murmur may be present for some time, yet autopsy will reveal no stenosis of the mitral valve. In this case we know little of the time element. We only know that cardiac disease did exist one year prior to admission.

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It seems more likely that true mitral stenosis did not yet exist.

The case thus summarized so closely fits the clinical picture of rheumatic fever that one is inclined to be more than a little suspicious. Cases chosen for a C.P.C. are seldom clearcut and I doubt that this is an exception. Let us, then, probe all other possibilities.

First, there are many diseases suggested by the clinical picture which one may dismiss with relative ease. They are: septic arthritis, rheumatoid arthritis, acute leukemia, Schönlein's purpura, Salmonella infections, Haverhill fever, Still's disease, hemophilia, scurvy, malignant disease of the joints, lead poisoning, Felty's syndrome, coccidioidomycosis, sickle cell anemia, erythema nodosum, dermatomyositis and more. There are others which merit more consideration.

Brucellosis cannot be easily discarded. Arthritis is one of the most common complications of both the acute and chronic forms of the disease. Pyuria may also occur. Endocarditis may result from brucella infection superimposed on a previously damaged heart valve. Pericarditis is a possible complication. However, no mention is made of serum agglutinations and I assume that no pertinent data has been withheld. Nor can one overlook the 5 negative blood cultures.

Lues must always be considered and is a disease which is capable of producing the valvular heart lesions. The diagnostic necessity, a Wassermann test, is not mentioned in the protocol. However, no stigmata of congenital lues are described and the possibility of acquired syphilis prior to six years of age is unlikely. Further, joint involvement occurs more often in the knees and the cardiac murmurs described are not the ones usually associated with syphilis.

The possibility that congenital heart disease may be a basis for this patient's illness takes two forms. There must be either complicating rheumatic fever or subacute bacterial endocarditis. In either event, the congenital lesion must be one of the noncyanotic or potentially cyanotic group. The possibilities seem to be (1) interatrial septal defect, (2) interventricular septal defect and (3) patent ductus arteriosus.

Interatrial septal defect may be quickly dismissed since in this condition roentgenogram reveals increased size of the right ventricle and atrium and a prominent pulmonary artery and if the electrocardiogram shows anything at all, it is a tendency toward right axis deviation, with sometimes higher than normal P waves. It should be noted that the described murmurs may be found in this condition if an associated mitral valvulitis (Lutembacher syndrome) exists.

In interventricular septal defect, the harsh systolic murmur is heard in the third or fourth intercostal spaces and is transmitted for only a short distance. There is no mention of thrill in the protocol, but a systolic thrill is characteristically present over the same area. Roentgenograms produce no typical lesion and electrocardiograms are normal unless the conduction pathways through the ventricles have been interrupted by the septal defect.

It seems unlikely that bacterial endocarditis would be present for four and one-half years before precipitating a fatal outcome. Therefore, if this congenital defect was present the patient must also have had subsequent rheumatic fever.

Patent ductus arteriosus is the other possibility among the congenital heart lesions. Here, the systemic blood pressure is affected by drainage of blood from the aorta into the ductus and pulmonary circulation. Systolic readings are generally elevated and diastolic readings reduced. The systolic thrill which is often present will again be omitted from discussion since none is mentioned in the protocol. The typical murmur is machinery-like, persisting throughout both systole and diastole, but there may be only a systolic murmur. The systolic murmur is heard over the whole precordium and is loudest over the base. The diastolic murmur is softer and is audible only at the upper part of the left chest, maximal at the second left interspace. On roentgenogram the cardiac shadows may be normal or there may be enlargement of the pulmonary artery. If the defect is large, the left ventricle may be increased in size. Electrocardiograms are usually normal.

This condition is particularly susceptible to subacute bacterial endocarditis, which usually appears first at the pulmonary end of the ductus but again it is unlikely that bacterial endocarditis would exist for such a long period. We must again assume that there has been intercurrent rheumatic fever.

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Once hospitalization takes place the question of subacute bacterial endocarditis is raised anew. Differentiation between rheumatic fever and subacute bacterial endocarditis is not always easy. There are, however, several points of difference. In subacute bacterial endocarditis the significant points to remember are petechiae, splenic enlargement, red blood cells in the urine, clubbing of the fingers, painful fingertips, emboli and a positive blood culture. None of these occur in rheumatic fever except emboli, which may be present when bits of sterile mural thrombi, generally present in the auricles, become dislodged. None of these was present in this case unless pulmonary embolus occurred as a terminal event. On the other hand, this patient developed a pericardial friction rub and pericarditis is commonly seen with rheumatic infections and very rarely with bacterial endocarditis. Relief of chest pain with aspirin may or may not have been significant.

Two other conditions must be considered, disseminated lupus erythematosus and periarteritis nodosa.

Lupus erythematosus presents the clinical manifestation of irregular fever with tendency to remissions of variable duration (even years) and tendency to recurrent involvement of synovial and serous membranes (polyarthritis, pericarditis, etc.). There is no depression of the bone marrow function, but if one is to hypothesize the Libman-Sacks type of endocarditis there is probably a secondary infection present to account for the leukocytosis. The disease occurs preponderantly in young females but the youngest recorded case was 7 years old. Finally, there is no kidney involvement and there are no skin manifestations. In short, this case presents a clinical picture suggestive of disseminated lupus erythematosus, but the age of the patient at onset, leukocytosis instead of leukopenia, absence of skin lesions and of nephritic involvement make it an unlikely diagnosis.

Periarteritis nodosa is capable of producing the picture heretofore described with fever, abdominal pain, pain in the extremities, leukocytosis with predominance of polymorphonuclear cells and tachycardia out of proportion to the fever. Cortisone will often give temporary relief at the time of an acute attack. It is true that there is no eosinophilia unless one follows the dictum that the presence of even one eosinophile in the presence of leukocytosis is abnormal. Further, there is no sign of nephritis, no hypertension and no nodules. However, periarteritis nodosa, like syphilis, is a great imitator and can follow almost any pattern. It is also true that periarteritis nodosa is often found concurrently with rheumatic fever. If one is grasping at straws in an effort to seek out something other than the apparent diagnosis, this seems to be the most logical variation.

Discussion of this case would not be complete unless some further comment is made on the patient's terminal illness. The enlarged liver, nausea, restlessness, dyspnea, cyanosis, hemoptysis, coma and lethal exodus, produce a picture which closely simulates myocardial failure. Since bacterial endocarditis appears to be unlikely, the other possibility is that a pulmonary infarct has occurred from a dislodged sterile thrombus. In favor of this thesis is the relatively acute course of the final two days of life, during which the patient suddenly began to grow worse with dyspnea, rapid pulse and respiration, requiring oxygen, then cyanosis and hemoptysis just before the fatal outcome.

My diagnosis then is:

Rheumatic Fever
Rheumatic Pancarditis
Mitral Insufficiency
Mitral Roughening (Stenosis ?)
Pericarditis
Congestive Heart Failure
Pulmonary Infarction

Finally, it must be said that a clinician in charge of a patient presenting the clinical picture outlined would seem to be foolhardy not to treat the patient as a case of rheumatic fever. Although straightforward cases are unlikely in a C.P.C., there is little real evidence of any other disease entity.

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CORRESPONDENCE

Medical Economics of a By-gone Day

In this day and age when too many of the younger generation of physicians seem imbued with a "get-rich-quick" urge; or "soak 'em for all the traffic will bear" policy, it may be of interest to relate briefly the "medical economics" of a distinguished physician long since gathered unto his forefathers and resting in eternal sleep in that hallowed ground of the Southland, Hollywood Cemetery in Richmond, Virginia.

I speak of Lawrence Waring, M.D. of Richmond, Virginia. Sprung from an old family of colonial Virginia, the Warings of Essex County, Virginia, Doctor Waring was in medical practice in Richmond in the days immediately preceding the Civil War, or War of the Rebellion, as some prefer to term it. As with all true Southerners old enough to shoulder a musket, Doctor Waring volunteered for service in the Confederate States Army immediately upon the secession of his native Virginia from the Union. Always somewhat eccentric, Doctor Waring did not take kindly to the restrictions of military service, or the to-him-arbitrary orders of some of his immediate superiors in medical service. Thus from this viewpoint his military career was not as outstanding as that of his kinsman, William Latane, M.D., Captain, Ninth Virginia Calvary, whose heroic death at the head of his troop, the only casualty of Stuart's famous ride around McClellan, has been immortalized in Southern annals by the painting and the poem "The Burial of Latane."

However, his superiors recognized that here was a man whose forte was medicine, not saber and musket strife; so he was taken out of immediate military service and placed in charge of a large military hospital in Richmond, where his ability and medical talents enabled him to render outstanding service to the cause of the Confederacy for the balance of the war.

After termination of the war with Lee's surrender at Appomattox, Doctor Waring resumed his medical practice in the city of Richmond. Fittingly, perhaps, his kinsmen, John L. Waring (my father) surrendered at Appomattox as a 14 year old boy private in the Confederate infantry.

It is said that no night was too dark or cold or stormy but that Doctor Waring was ready for all calls for his services from rich or poor, black or white. Compensation for his services was a minor matter for this modest and kindly Disciple of the Healing Art. While his patients numbered many of the wealthiest and most prominent citizens of the city, his practice naturally perhaps gravitated towards the poorer sections of the city, where the poor knew he would attend them whenever called whether they were able to compensate him in some measure for his services or not. As the years wore on, the good doctor was a familiar sight on the streets of Richmond, but as a financial success for those days he was more or less of a total loss: no footman and spanking team of bays for him; no clothes of the latest cut and costliest weave, but usually clothing that became threadbare before discarded. When his wealthy friends and patients saw that he needed a new suit or shoes or overcoat, they escorted him into the finest tailoring establishment and purchased a new suit for him of the finest cloth. When his faithful old horse and buggy became worn out with the travels of the day, in due course a new horse and buggy was hitched in front of his office and the old rig was seen no more. And so time went on, and it took its toll of the aging doctor known by sight and reputation to all of Richmond.

Finally, he was taken down with an illness which his long experience told him would be fatal. Then he called his faithful colored servant and directed him to gather up and bring to his bedside all of his books and records. These, one and all, he directed to be placed on the open fire in his sick room and burned to ashes, explaining to his surprised servitor that when he was gone he wanted no one to be trying to collect long past-due bills from anyone, rich or poor; and that with his books and records all burned, no one would know whom he had attended professionally.

And so the good doctor was gathered unto his fathers. To this day the name of Lawrence Waring, M.D. is known and remembered in the city of Richmond as "the Doctor of the Poor"; and it is said that his funeral was one of the largest attended in the

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history of the city; rich and poor, black and white; in manifest grief at passing of their unfailing friend and physician.

Today, on a commanding knoll in Hollywood cemetery, "the graveyard of the South" in Richmond, close by the last resting place of the immortal General J. E. B. Stuart, C.S.A., stands a simple, tall obelisk of granite pointing ever skyward. The simple inscription reads "Lawrence Waring, M.D.", with date of his birth and death; and below that these words:

> **"Erected by the Poor of Richmond in grateful memory."**

Into that monument went the pennies and the nickels and the dimes of the poor people of Richmond; all contributing whatever amount they could rake up.

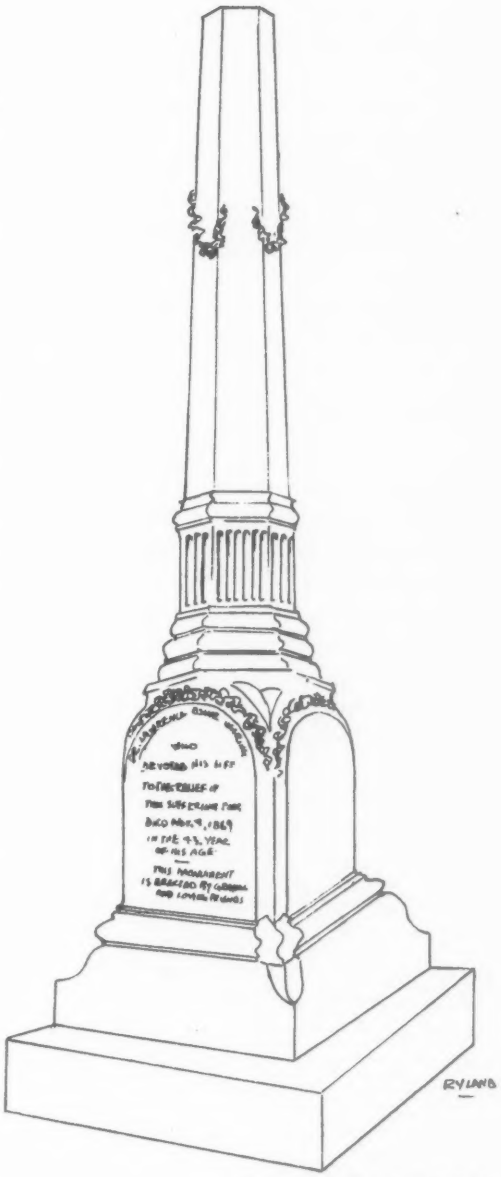
And so, while Lawrence Waring, M.D. was a total failure judged by present-day economic standards, the fact remains that as a Man and a Physician he left a mark for all time that many a young physician of today can shoot at and ponder?

J. B. H. WARING, M.D.
Wilmington, Ohio

EDITOR'S NOTE. Lawrence Roane Waring, the son of Horace Waring, was born February 21, 1826, and was educated at Rumford Academy, Richmond College, and the University of Virginia, (M.D. 1845). He was a bachelor and lived in the old Ballard Hotel. He died November 4, 1869. Policemen were needed to manage the great crowd at his funeral and mass was said at two Catholic churches, although the Doctor was a protestant. He is buried in Hollywood on the same circle with President Monroe, President Tyler, and Commodore Maury. The inscription on his monument reads

"DR. LAWRENCE ROANE WARING
WHO
DEVOTED HIS LIFE
TO THE RELIEF OF THE SUFFERING POOR
DIED NOVEMBER 4, 1869
IN THE 43, YEAR
OF HIS AGE.

THIS MONUMENT
IS ERECTED BY GRATEFUL
AND LOVING FRIENDS."



Courtesy of Miss Anne Ryland

XUM

MENTAL HEALTH

JOSEPH E. BARRETT, M.D.
Commissioner, Department of Mental Hygiene and Hospitals

Better Mental Health Through Teacher Education*

The great majority of the future population of our mental hospitals and penal institutions, and the great majority of all the people who in the future will have difficulty in adjusting themselves to conditions of life, are now enrolled in the public school.

The very fact that the great majority of all children in our culture pass through the public schools, places upon the school a great responsibility and at the same time provides a great opportunity for influencing the total life of the ma-ses of our population.

Almost a hundred years ago, Herbert Spencer said, "The purpose of education is to prepare for complete living". When we review the literature of our own Virginia State Department of Education we find numerous statements concerning the duties of teachers in regard to the development of sound mental health. For example, such statements as these are found: "The aim of the public school system is to provide the opportunity for the greatest possible development of the child as an individual and as a member of society." "It may be said that an adequate program of education should provide experiences for physical, mental, emotional, and social development." Parents want their children to have "school experiences which will develop wholesome attitudes as a basis for sound mental health." "Everybody knows that the first few years in the elementary school are tremendously important for the child. Not so many people know how much understanding and professional skill is needed by teachers who want children to have the best possible start in school." "The teacher has the responsibility for understanding the characteristics of children with whom she works and the environment from which they come. Children on entering school often have a feeling of insecurity, feel the loss of mother, want to be loved, and to be praised regardless of their success. A teacher's program must include conferences with parents, and individual observation of children. Her interest and observations must be as keen and colored with curiosity as those of the child."

A good teacher is interested in the welfare of children who come to her each day. Let us say that she has forty of them. According to statistics and estimates made by statisticians, on the average, out of every forty children in a group, four will need psychiatric help sometime during their lives, and two will spend some time in a mental hospital. Two others are headed toward a social and emotional adjustment so poor that they will not be able to live normal lives but will depend upon the care of family and friends. One will commit a felony and serve a penitentiary term, and two others of the forty will be prepared so meagerly by their school experiences for life in the modern world that they will never master the simplest mechanics of their environment and will end their days as derelicts.

When we speak of numbers in the aggregate, it sometimes does not appeal directly to the teacher. But when these figures are broken down to apply to the teacher's own class, they take on meaning. When she looks into these forty faces and realizes the tragedy and heartbreak that may await many of them, a sense of fear engulfs her, and she aks herself, "Is there nothing I can do to help these children." We believe that modern psychology and education give a good deal of hope, that there is something that she can do to prevent the tragedy. These tragedies are not fated; they are not absolutes of nature; they arise from causes which are known and which are capable of being handled. Probably not more than one of each of the forty children is born into the world to be mentally incompetent and none is born to be a criminal. Society teaches them derangement and crime. If teachers can be trained to detect the earliest symptoms, and the procedures through which, if taken in time, they may be prevented, we will have made rapid strides in promoting good mental health in classrooms. The public school has a great opportunity, and, in the thinking of many people, has a definite responsibility toward helping children to grow up into normal and acceptable ways

*Article by Minor Wine Thomas, Ph.D., Mountain Empire Guidance Center, Radford, Virginia, and professor of Psychology, Radford College.

of behavior. If a teacher can be taught to recognize the significant symptoms of emotional disorders while the child is yet young, and if necessary seek advice and counseling from capable professional people, a great deal of later difficulties might be prevented.

Perhaps the first hurdle which must be taken by any teacher who wishes to champion the cause of mental health is the inclination to regard mental illness as a disgrace. This attitude is old and rooted in history and even despite the great strides that have been made in psychology and psychiatry, there is still, in the minds of the majority of people, the tendency to regard mental illness with horror and repulsion and think of it as something to be hidden away in closets and spoken of only in whispers. Little can be done in the task of identifying and correcting early cases of mental disorders so long as this attitude persists. We must convince the public, and the teacher must clearly understand, that a so-called "insane" person is just a sick person and not a person possessed of an evil spirit. No single factor retards the process of better mental health more than does this feeling that the disturbed individual is somehow monstrous and a shame to the family. For example, the average parent appreciates being advised by the teacher that his child has a physical defect, such as bad tonsils or faulty vision, and he usually takes steps to correct the condition. But let this same teacher tell this same parent that his child shows some signs of incipient neurosis, and his reaction will be one of indignant denial and a strenuous effort to prove the teacher entirely wrong.

Another erroneous idea which must be combated is that mental illness is something that attacks the person suddenly or that one "abruptly goes crazy". It is well recognized by psychiatrists that almost every case of mental disturbance has behind it a long history, usually beginning in early childhood. The important thing that is necessary here is for the teacher to be able to detect the symptoms in children long before they reach the danger point. Many major problems of adjustment, crime, neurosis or even psychosis, reach back into early childhood or infancy. There are ofttimes little pecularities about which parents are apt to say, "Oh, it's all right, Bill will grow out of that." The truth is generally the reverse. Without help and guidance, Bill will tend to grow into it rather than grow out of it. The bad habits of childhood, the abnormal reactions, the asocial attitudes do not correct themselves with the mere passage of time. Instead, they tend to become more entrenched with every passing day until as adults a large per cent of the population fails to make adequate adjustment and suffers unhappiness, frustration and defeat in their personal, social, and economic lives. The teacher must face these facts, and, in the majority of cases, the battle for normal mental adjustment is lost or won before the end of school days.

A teacher, to measure up to her responsibility and opportunity for developing this wholesome life of the child, needs to have a great deal of definite teaching and training in her preparation program. In general, the school does an effective job in teaching the children to read and write and to know something of the other academic subjects. That is good. The school is interested in such aspects of living as the physical health of the children, recreation, and citizenship. The school has made wonderful progress in its fight against illiteracy, but the greatest cause of unhappiness, inefficiency, and dependency today is not illiteracy. Most of those people who as adults are unable to take care of themselves and are dependent upon others, know how to read and write pretty well and are pretty well educated by the traditional curriculum. However, while they were learning reading and writing and the other academic subjects, they failed to learn how to live—how to live with other people, how to get along efficiently, cooperatively, and to adjust themselves to the facts and conditions of life as they exist.

It is not proposed that the teacher training program be extended to the point where a teacher would become a professionally trained psychologist. On the other hand, a reasonably intelligent man or woman can be taught during his teacher preparation program to recognize some of the symptoms of poorly adjusted children, and can refer these to professionally trained people. A teacher training program should include a reasonable amount of time and attention given to a recognition of unhealthy symptoms in childhood. If the teacher can be led to see that many of the problems she faces as a teacher are symptoms of conflict within the child, and if she can be taught to seek guidance and professional counseling when she does not feel competent herself to deal with the situation, we will have gone a long way toward developing sound mental health.

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If the public schools of Virginia are to really "provide the opportunity for the greatest possible development of the child as an individual and as a member of society", and have an adequate program to "provide experiences for physical, mental, emotional and social development" and "to develop wholesome attitudes as a basis for sound mental health", they must be interested in helping children to grow into well balanced individuals, to be efficient in their handling and dealing with their own problems and the problems of dealing with other people.

The mentally healthy adult attempts to solve his problems in a frank and straightforward manner. He tries to understand the facts of life and then face them squarely as they are, no matter how disagreeable or forbidding they may be. He tries to attack his problem directly instead of side stepping it or running away from it. Before making a decision he tries to size up the whole situation and to evaluate the component parts so as to be able to react to the whole situation with due consideration of all the important relevant facts and circumstances.

The outcome, in the case of most persons who have thus attacked the vicissitudes and exigencies of life, is a reasonably satisfactory adjustment to adulthood. Habits and techniques of facing the facts of life in such a manner *must be learned,* and the time to begin such learnings is in childhood. It is in facilitating the learning of such habits that we think the school can play a vital and important part. Such habits must be practiced consistently over a long period of time so as to become deeply and permanently ingrained in the personality.

In contrast with the well-balanced, efficient, mentally healthy adult, is the maladjusted or inefficient individual. Instead of attacking his problems in a forthright, objective manner, he resorts to a great variety of subterfuges, tricks and blinds for concealing his failures, shortcomings or dissatisfactions, or for dodging reality and retreating from the ugly facts of life into an illusion of security. The numerous response mechanisms that unadjusted persons employ for solving their problems, are the means for cloaking their inadequacies; for disguising their feelings of evading their responsibilities and for finding security and satisfaction in deceptive compromise.

From the mental health point of view, response mechanisms such as these, when frequently used as a means of escape from difficulty, or as a means of solving shortcomings, are inimical to the preservation of mental efficiency and often disruptive mechanisms may generate a host of mental conflicts and difficulties which may lead to further dissatisfactions, mental distortion and sometimes to neurosis and even psychosis.

It is rather easy to see these inefficient traits in adults. The early beginnings are much harder to recognize in the child. These behavior habits do not suddenly come into being "full blown" in the adult. They usually develop out of habits begun in childhood, which go unnoticed or unrecognized until much later in life—probably too late to do much about it. The great opportunity and challenge of the public school is to recognize the early symptoms in the child and to help him develop more efficient habits, more wholesome attitudes, and more effective techniques of facing and resolving his daily problems.

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PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.
Virginia State Health Commissioner

Meeting of the Middle Atlantic States Conference on Rural Health Services

In the interest of better community health services, The Governor of Virginia invited the Governors of North Carolina, West Virginia, Maryland, and the District of Columbia, to designate representatives of their respective states to attend a conference, to be held in Virginia, for the purpose of discussing ways and means of meeting and solving various problems in the field of public health. Such a conference was heartily approved. The Virginia Council on Health and Medical Care sponsored the Conference, which was held in Roanoke, Virginia, November 16-18, and it was attended by many outstanding leaders interested in better health and civic improvements.

Governor Battle was represented by Lieutenant-Governor A. E. S. Stephens. Among those attending were: The State Health Commissioners of North Carolina, Maryland, District of Columbia, and Virginia; representatives of the U. S. Public Health Service, state and local health departments, state and local public welfare agencies, state medical societies, state dental associations, state and local mental hygiene departments and societies, voluntary health organizations, Parent-Teacher Associations, farm groups, hospital and nursing associations, educational institutions and many other leading citizens of the respective states interested in community life.

Some of the problems discussed in study groups and conclusions reached are:

Problem: WHAT SHOULD BE THE FUNCTIONS AND METHODS OF PRACTICE OF PUBLIC HEALTH?

Conclusions: 1. An essential of a good health program is the maintenance of cooperative relationships between health directors and private physicians through an exchange of information and a better understanding of the rule of each by the other. More private physicians should be brought into active community public health participation. Any major public health program should be discussed with the state medical society before it is launched before the public.

2. The most effective method of securing adequate financial support and physical equipment for a health department is through an aroused citizenry. Community health councils have proved most effective.

3. Existing services of health departments should be constantly re-evaluated and intelligently reviewed so that any existing unnecessary service can be eliminated.

4. The role of the health department in providing medical care varies in the several states. In Maryland, the health department acts as administrator of a program promoted by the State Medical Society, with services made available through private physicians. This program gives medical and home nursing care for the indigent and the medically indigent.

Problem: HOW SHOULD CITIZENS, OFFICIAL AGENCIES, PROFESSIONAL GROUPS, AND VOLUNTARY AGENCIES WORK TOGETHER SMOOTHLY?

Conclusions: It was pointed out that in many of our communities leadership devolves upon a small group of individuals (possibly 12%) who, because they are called on so frequently, are spread thin and unable to give the service which a new venture needs. There is potential leadership in many groups which should be utilized in promoting a new community council. This leadership will be found not only in the organizations engaged in some form of health work but in all types of groups: Professional groups, labor organizations, churches and others.

Problem: HOW DO WE GET COMMUNITY WIDE HEALTH EDUCATION?

Conclusions: 1. There is need for schools to assume major responsibility for the formal instruction of the school age child in health information and the development of proper health habits and attitudes.

2. The school, through its teachers, should recognize its responsibility in creating a healthful physical, mental and moral environment in the classroom for the child.

3. A broader recognition is needed of the fact that health is the first objective of education and that each teacher is a health teacher.

4. School personnel should have knowledge of available health services in the community.

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5. There is need for a re-evaluation of content material in health education courses taught in institutions training teachers.

Problem: HOW SHOULD FAMILIES, PRIVATE PRACTITIONERS, SCHOOLS AND HEALTH AGENCIES PROVIDE HEALTH SERVICES TO THE SCHOOL CHILD?

Conclusions: It was the consensus of the group that providing health services to school age children was the primary responsibility of the parents. It was a responsibility of the public agencies to assist the families when they were unable to realize their responsibilities or to assume them.

We need to recognize the role of the private physician, the role of the health department and the role of other community agencies in providing health services to school age children, again recognizing that basic responsibility of securing the needed services rests with the family.

Problem: HOW DO COMMUNITIES WORK TOGETHER TO PROVIDE SERVICES TO THE AGING AND CHRONICALLY ILL?

Conclusions: 1. It was agreed that the problems connected with aging are real, that they are increasing in intensity and more and more demand a solution. At present no sufficient answer has been found to the recreational, social and economic requirements of the aging or to the medical needs of the chronically ill.

As to the role of the health department in chronic disease case finding, it was concluded that this role is supplemental to agreements made with local medical societies.

Regarding the use to be made of multiphasic examinations, the group felt that it had no sufficient data upon which to offer conclusions.

Problem: WHAT ARE THE PROBLEMS OF MEDICAL CARE AND INSURANCE?

Dr. Robert H. Riley, Maryland Commissioner of Health, outlined for the group the State Hospital Division's program, which is handled through the Maryland State Health Department. All cases are approved by the State Welfare Board. This department takes care of indigents and medically indigents, paying full cost for approved cases.

Dr. Brewer, President of the Medical Society of North Carolina, described the present program in North Carolina, outlining the inadequacies of the program at the state level, but emphasizing that many of the counties had programs which, added to their state payment, constituted adequate payment to hospitals for services rendered.

Dr. W. T. Sanger outlined the equalization program now being used in the State of Virginia.

THE CONSENSUS OF THE GROUP WAS:

a. That by and large, the care of the indigents is a responsibility of governmental agencies through tax sources.

b. Medical indigents should be enrolled in Blue Cross plans and medical care plans insofar as possible.

Some of the problems related to the care of the indigent might be solved by physicians working on a voluntary basis in clinics and health centers. It is felt that greater service can be rendered if the clinics and health centers, wherever possible, are connected directly with hospitals.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Nov. 1952	Nov. 1951	Jan.-Nov. 1952	Jan.-Nov. 1951
Brucellosis	9	5	43	76
Diarrhea & Dysentery	120	252	2,287	2,947
Diphtheria	36	41	149	167
Hepatitis	162	2	779	25
Measles	69	153	15,404	13,993
Meningitis (Meningococcic)	21	9	184	111
Poliomyelitis	44	16	669	251
Rocky Mt. Spotted Fever	3	1	432	60
Scarlet Fever	130	111	725	901
Tularemia	1	0	42	35
Typhoid & Paratyphoid	10	11	89	63
Rabies in Animals	32	15	432	194

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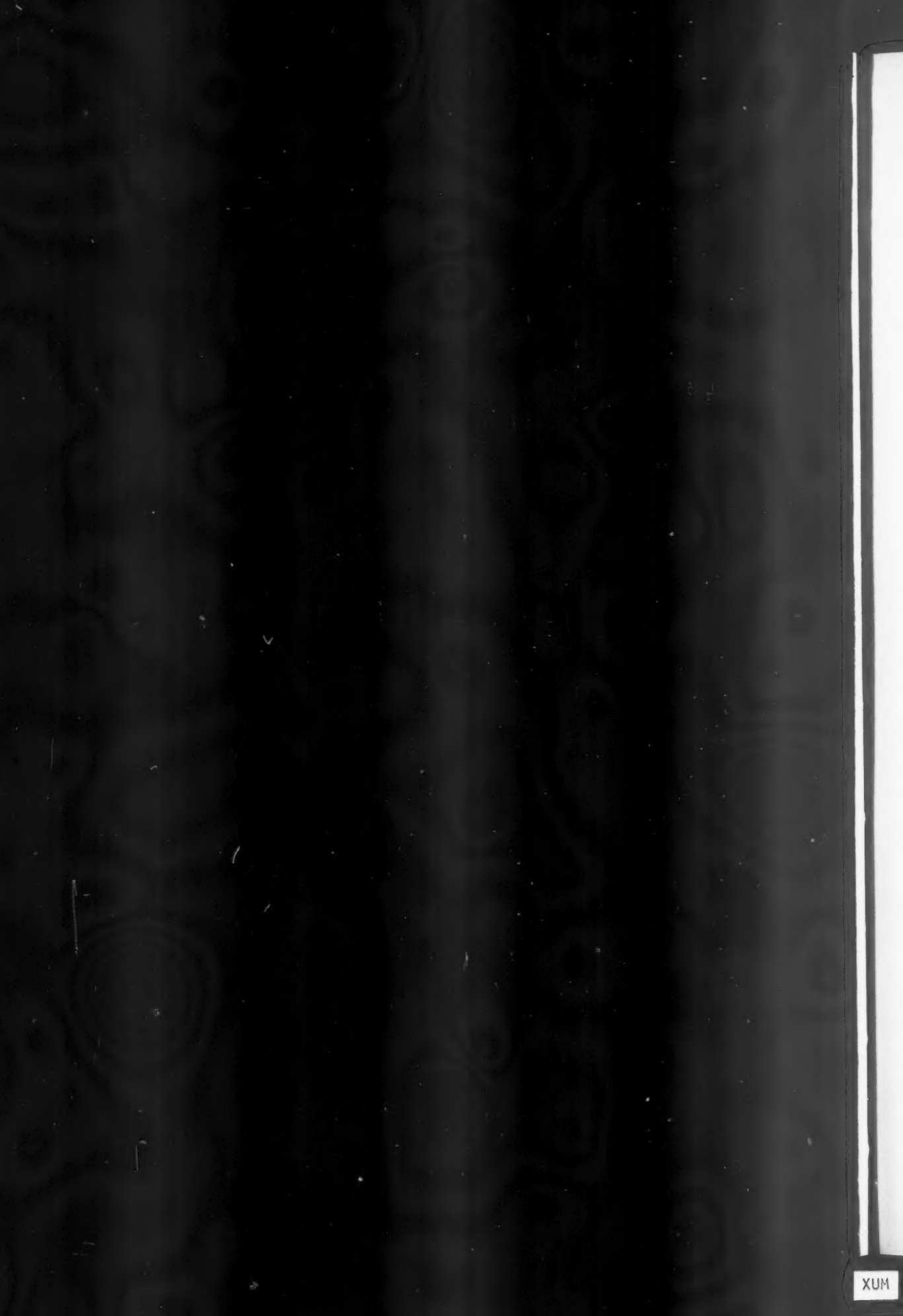
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Medical Society of Virginia Cancer Committee

Chairman, George Cooper, Jr., M. D.

Albemarle Hotel Building, Charlottesville, Virginia

Reprints of this and preceding Bulletins may be obtained from this office

January 1, 1953

Case Reports

A 52 year old woman, referred to a Tumor Clinic, reported that nine months previously she had suffered an attack of "piles," accompanied by weakness, pain on bowel movement, and passage of small amounts of bright red blood with each stool. She saw her physician at once. He inspected the anus, agreed that she did have "piles," and prescribed a salve. The bleeding continued, the weakness progressed, the bowel movements became difficult, and she resorted to the regular use of laxatives. With the onset of diarrhea and tarry stools three weeks previously, the physician had performed a digital rectal examination and found tumor masses studding the rectum as high as he could reach. On vaginal examination, he found a frozen pelvis. He referred the patient to a Tumor Clinic. The biopsy report was carcinoma of the rectum, a colostomy was done, and the immediate response to palliative X-ray therapy has been good.

A 59 year old man was admitted to a hospital, complaining that for seven months he had been suffering with progressive fatigue, nervousness, and moderate weight loss. When he first saw his family physician, soon after the onset of fatigue, he had no other symptoms. Examination, including digital rectal, was negative. He took more rest and tried to worry less, but after a month of this regime, he was unimproved. He was referred to an internist, who could find no organic lesion, and placed him on a stricter regime. But three months later, still no better, there was an onset of alternating constipation and diarrhea. He returned to the internist, who reexamined him and had another physician examine him, too. Again examination, including digital rectal, was negative. The patient was next referred to a radiologist who, on barium enema, found a small defect in the caecum which he interpreted as an adhesion resulting from an appendectomy some years before. After six weeks more of no improvement, the patient became very dissatisfied with his lack of progress, and sought admission at the hospital.

Here the physical examination, including digital rectal, was negative. But on proctoscopy, his first, a fungating tumor was discovered in the lower sigmoid above the reach of the examining finger. The biopsy report was carcinoma. A second barium enema showed that, in the four month interval, the caecal defect had grown larger.

At exploratory laparotomy, carcinoma of the caecum and sigmoid with extension to the mesenteric lymph nodes was found.

To quote from an article by Dr. Fred Rankin in the March 4, 1950, issue of the J. A. M. A., ". . approximately 50,000 persons die in the United States each year from cancer of this segment of the bowel (the lower portion of the gastro-intestinal tract). Such statistics are of a necessity inaccurate and probably too low. Certainly a great many times that number of persons are suffering with various stages of the disease. This is a sad commentary on the physician's ability to diagnose these cases earlier, although attention has been focused on this point for several decades. Actually, it is an indictment in part of medical practice because *many of these lesions are permitted to grow to large size and even to metastasize before an adequate examination of the patient is performed . . . The diagnosis of cancer of the rectum (and lower sigmoid) is simple and seldom is missed if the physician performs (1) digital examination, (2) proctoscopic examination and (3) biopsy.*"

Comment: 1. About 75 per cent of cancers of the large bowel occur in the rectum and sigmoid. Over 50 per cent of these are in

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reach of the examining finger. An additional 40 per cent of these may be visualized through the proctoscope. Only 5 to 10 per cent are above the range of the proctoscope.

2. Digital rectal examination is as much a part of a routine physical as a blood pressure determination.

3. In the presence of any symptomatology suggesting a large bowel abnormality, proctoscopy is indicated, followed by barium enema.

4. Diagnosis of abnormalities of the rectum and lower sigmoid is the responsibility of the physician doing the physical examination and the proctoscopy. This region is accessible to direct inspection and is very difficult to examine roentgenologically.

5. Diagnosis of abnormalities above the lower sigmoid is the responsibility of the roentgenologist. But it must be remembered that his interpretation does not constitute a pathological diagnosis. It is subject to error. Persistent symptomatology is indication for repeated X-ray examinations.

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PROCEEDINGS

THE MEDICAL SOCIETY OF VIRGINIA

1952 ANNUAL MEETING

Richmond

September 28, 29, 30 and October 1, 1952

HOUSE OF DELEGATES

(Although verbatim minutes, insofar as the court reporter could get them, are in our records, this condensation is offered with the hope that the membership can know of the salient topics discussed at our House of Delegates meetings.)

FIRST SESSION

September 28, 1952

The House of Delegates of The Medical Society of Virginia met in the Auditorium of the Richmond's Hotel Jefferson on September 28, and was called to order at 8:00 P. M. by Dr. W. C. Caudill, Speaker of the House.

Dr. Caudill called for a report from Dr. Edward Haddock, Chairman of the Credentials Committee, and learned that a quorum was present.

The minutes of the 1951 meeting were then approved and passed without discussion.

Dr. Vincent W. Archer, Chairman of a special committee appointed to outline reference committee procedure for the Annual Meeting, was recognized for the purpose of explaining the proposed procedure. He referred to the committee's report published in the September issue of the Virginia Medical Monthly (page 525), and emphasized the fact that any member of the society could attend the meeting of the Reference Committee and have the privilege of the floor.

The report of Dr. Archer's committee was adopted and the reference committee procedure initiated.

The Speaker then recognized Dr. Harry J. Warthen, who presented the proposed budget for 1953 as recommended by the Council (see page 700, Virginia Medical Monthly, December 1952), and reported on the financial condition of the Society. The total budget of $66,110.00 was unanimously adopted.

The afternoon meeting of the Council was reported by Mr. Howard, Executive Secretary, and those items referred to the House of Delegates for action were read.

The first item was a resolution of the American Association of Blood Banks pertaining to the National Blood program (See minutes of Second Session, House of Delegates). A resolution concerning the World Medical Association was then read (See minutes of Second Session).

Mr. Howard stated that two other reports and resolutions would be presented later during the evening by Dr. Marcellus Johnson, Jr., and Dr. Harry J. Warthen.

It was then moved and passed that the report of Council be adopted. After some discussion, it was ruled that the resolutions received from Council should be referred to the Reference Committee.

Dr. Caudill then recognized Dr. John T. T. Hundley, President of The Medical Society of Virginia, who offered the following report on his tenure of office:

"I am not going to make a formal report of a year's work. But I do assure you it has been a year's work. First, I want to express my very hearty appreciation and thanks to every member of the office for their complete cooperation at all time, regardless of the hours, other demands and what not. And I solicit from all of you your fullest cooperation with Mr. Howard, not just criticism, not just writing in for information, both of which are in order, but by sending him reports of your meetings, sending him times of meetings so that he has an opportunity to meet with your Societies, putting him on your mailing lists so that he can get around and make the acquaintance of the local societies and their memberships. I wish to solicit that particularly. I wish also to re-iterate the invitation to see the Headquarters Building. This is the first meeting held in Richmond since we established the headquarters at 1105 West Franklin, and for those who have not seen that building, I hope you will take the opportunity to go up there and look it over. See where we are working and see how we are working.

"And I would like to say that much to my surprise, and I expect it is a surprise to you, we have lived within our budget in the operation of that building this year. I didn't think we would, and I think we have done well.

"I want to express appreciation to every member of the Society, and particularly to the members and chairmen of the various committees. I have made every effort to make this a committee year. To me The Medical Society of Virginia and any organization of similar type has to be primarily a committee organization. And I have tried very largely to refer everything which did not require immediate action to committees. There have been quite a few things that some of you have seen from the newspapers that did require immediate action that were not referred to committees. The committees have been most loyal and most cooperative in all respects.

"As I terminate my term of office, I suppose it is with a relatively healthy attitude. I feel very humble that so many things have not been done. And I have some pride that some few things have been accomplished. And I solicit for your incoming President the same sort of co-

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operation you have given me this year. I did not want to miss an opportunity to say this to this group, because usually at the last meeting when we install the President, that is usually a time of a good deal of shifting around, and a representative audience is hardly reached at the time. But I do want to thank you for your cooperation. Any failures this year have been mine and certainly not yours and I thank you very heartily."

Delegates to special conventions were then recognized: Dr. Charles L. Outland, delegate to the Medical Society of the State of North Carolina, and Dr. Harold W. Miller, delegate to the Virginia Pharmaceutical Association.

Dr. Caudill introduced the following visiting delegates to the Annual Meeting: Dr. D. B. Armistead, Dr. W. E. Smith and Dr. W. G. Suiter, delegates from the Medical Society of the State of North Carolina, Dr. G. A. C. Jennings, from the Virginia State Dental Association, Mr. Charles E. Green and Mr. Reginald R. Rooke, representing the Virginia Pharmaceutical Association, and Miss Hazel Knibb, delegate from the Graduate Nurses' Association of Virginia.

The Speaker called for any reports not published previously in the Virginia Medical Monthly or any supplemental reports.

A report of the Tuberculosis Committee was presented by Dr. C. Lydon Harrell, Norfolk. The Committee recommended that in the survey of tuberculosis in Virginia being sponsored by the Virginia TB Association and the State Department of Health, a study be conducted within mental and penal institutions. It was moved and passed that the report be accepted.

Dr. Edwin P. Lehman requested approval of the Cancer Committee's supplemental report, which would provide a tumor clinic at the Louise Obici Hospital in Suffolk.

Dr. McLemore Birdsong, Chairman of the Child Welfare Committee, asked if a survey of infant motality proposed in the Committee's report and published in the Monthly, would automatically be approved by the House of Delegates, should those previously published reports be adopted. The answer was in the affirmative.

A supplemental report of the Medical Service Committee was offered by Dr. John O. Boyd, Jr., Roanoke (See minutes of Second Session). It was moved and passed that the report be referred to the Reference Committee.

At this time a propaganda film entitled "Without Fear" was shown. The film is a vicious attack on those who oppose the socialization of medicine and is especially critical of the American Medical Association. It enabled the assembled delegates to see just how the proponents of government medicine operate.

Dr. Marcellus Johnson, Jr., Chairman of the Virginia Committee for the American Medical Education Foundation was next recognized for the purpose of presenting a report and resolution (See minutes of Second Session). Dr. Johnson's resolution was referred to the Reference Committee.

The Speaker then recognized Dr. Harry J. Warthen, who offered a resolution concerning need of additional funds for hospital construction (See minutes of Second Session). The resolution was referred to the Reference Committee.

Dr. Caudill next called for unfinished business and recognized Dr. J. Morrison Hutcheson, Richmond, who gave the background of a resolution offered during the 1951 Annual Meeting which requested component societies to consider the matter of deleting the word "white" from the Constitution of The Medical Society of Virginia, and instruct their delegates to the 1952 Annual Meeting as to whether or not the word "white" should be dropped from the Constitution.

There followed considerable discussion concerning the voting procedure, and an amendment to be proposed by Dr. Adams was ruled out of order. The ruling of the chair was appealed, but the motion to overrule the chair was lost.

A motion was made by Dr. Walter Martin, Norfolk, that the vote proceed by component societies. After a spirited debate concerning the constitutionality of such a vote, the motion was carried.

It was then moved to overrule the chair which had held component societies had the right to instruct their delegates how to vote. The motion was lost and the chair upheld.

It was further ruled that in those instances where component societies had not instructed their delegates, the delegations would be polled individually.

A poll was then taken and the results were Yes, 55; No, 48.

Further discussion ensued as to whether a second vote was to be taken of members of the House of Delegates individually. It was decided that members of Council, Delegates to the A.M.A., and past presidents (also members of the House of Delegates) should be polled individually to complete the vote. This was done and the final recording was 67 Yes, 54 No. A two-thirds majority was not had, and the original motion was lost.

Dr. John M. Emmett, Chairman of the Virginia Voluntary Advisory Committee to Selective Service, was recognized in order that several points concerning the drafting of physicians and dentists under Public Law 779 might be explained. Dr. Emmett explained that nearly all Priority 1 and 2 physicians and dentists had been called and those who have not may expect orders by the middle of 1953.

He went on to explain that members of the Priority 3 group will be called by age, with the youngest being called first. While there has been some processing of older dental registrants in this group, nothing definite is yet known concerning physicians in their late thirties and forties. However, it is not anticipated that physicians in these age groups will be called in the very near future.

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Dr. Emmett stated that his committee had no information concerning the possible call of physicians in Priority 4. It seems unlikely that this group faces call in the foreseeable future, especially when it is considered that our medical schools will be graduating many non veterans each year who must be classified as Priority 3.

The time and place of the Reference Committee meeting was then announced, and the meeting adjourned until Tuesday, September 30, at 4:00 P. M.

SECOND SESSION

September 30, 1952

A quorum being present, the House of Delegates of The Medical Society of Virginia reconvened at 4:00 P. M., Tuesday, September 30, in the Flemish Room of the Hotel Jefferson.

The Speaker recognized Dr. Hundley, who presented the report of the Reference Committee. The Committee recommended the acceptance and adoption of the report of the Executive Secretary-Treasurer, the report of the Committee on Publications and the report of the Department of Clinical and Medical Education. It was so moved and passed.

At this point, it was moved and seconded that Dr. Hundley, as retiring president, be made an honorary member of the Society. The motion carried unanimously.

Continuing with the Reference Committee report, it was recommended that the reports of the Membership Committee, the Legislative Committee, and the Finance Committee be adopted. It was so moved and passed.

Considered next was the Judicial Committee's report concerning certain proposed changes in the Constitution and By-Laws. Dr. Hutcheson explained that the Committee had found the proposals in proper order for deliberations, but that the Committee made no recommendation as to adoption. It was moved and seconded that the report, with the exception of that portion relating to Article IV of the Constitution (deletion of word "white") be adopted and the proposed constitutional and by-law changes likewise be adopted. The motion carried.

Dr. Hundley then recommended the adoption of the report of the Public Relations Committee. It was so moved and passed.

The Medical Service Committee had requested that the paragraph of its report concerning the Pre-paid Hospital Insurance Sub-committee be stressed. This was done and the report adopted.

The reports of the Advisory Committee to the Woman's Auxiliary and the Cancer Committee (including supplemental report) were adopted.

Dr. Hundley stressed that part of the report of the Committee on Child Welfare dealing with the proposed study of the outstanding etiological factors in infant mortality. It was moved and passed that this report be adopted in its entirety.

Reports of the Cerebral Palsy Committee and the Venereal Disease Control Committee were then adopted.

Concerning the report of the Committee to Confer with the State Board of Nurse Examiners, Dr. Hundley pointed out the fact that it had been recommended that any survey to determine nursing needs in Virginia be made by a source other than a governmental agency. Any funds for such a survey would necessarily be appropriated by the Executive Committee of Council. It was moved and passed that the report be adopted.

Dr. Hundley then mentioned the reports of the Committee on Rehabilitation, the Advisory Heart Committee, and the Committee on Maternal Health. All of these reports were adopted.

A question was raised concerning a portion of the report of the Committee on Mental Hygiene referring to certain persons qualified only as clinical psychologists who have engaged in the treatment of patients with mental disorders. It was explained that the matter had been taken up with the State Board of Medical Examiners and also the attorney of the Society. The report was then adopted.

The report of the Committee on Conservation of Hearing was then adopted.

Having covered committee reports, Dr. Hundley presented those resolutions considered by the Reference Committee. The following resolution pertaining to the need of additional State funds to augment inadequate Hill-Burton funds for hospital construction in Virginia was read: To His Excellency, The Governor of Virginia—The Honorable John S. Battle.

WHEREAS, The Virginia Hospital Advisory Council has approved the requests of nine hospitals situated in seven Virginia communities for Federal funds under the provision of the Hill-Burton Act, and

WHEREAS, The anticipated Federal funds allocated to hospitals in Virginia, during the next three years will total only thirty-three (33) per cent of the estimated cost of these institutions, and

WHEREAS, The campaigns to raise funds for these institutions and the plans formulated in terms of the needs in each community were based on the assumption that fifty-five (55) per cent of the cost would be obtained from Federal sources as had been true in the past, and

WHEREAS, Failure to obtain the full anticipated amount will seriously curtail or actually prevent the erection of these badly needed hospitals with resulting hazards to the health of citizens of this Commonwealth,

THEREFORE, BE IT RESOLVED THAT His Excellency, the Governor of Virginia, be respectfully requested and urged to recommend that the present inadequate Federal aid be augmented by funds from the Commonwealth of Virginia, as has been done in the past, at the next meeting of the Legislature to be held in December, 1952, in order that the proposed urgently needed hospitals may be erected as originally planned at the earliest possible moment.

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It was moved and passed that the resolution be adopted.

The next resolution presented was the following:

WHEREAS, Physicians throughout this country are alarmed over the potential dangers to the profession of medicine which are inherent in the proposed National Blood Program as promulgated by the Office of Defense Mobilization, Communication #2361, dated February 18, 1952, and

WHEREAS, This document states: "An effective blood program is of major national importance at all times", and "Such a program is of prime importance to agencies directly involved", namely the American National Red Cross and affiliated blood banks, the Department of Defense and the Federal Civil Defense Administration, but is only "of concern and interest to other organizations engaged in blood programs such as the American Medical Association, the American Hospital Association, and the American Association of Blood Banks", and

WHEREAS, This document authorized governmental control of a medical service during a national emergency without defining the limits and scope of the emergency or of the extent of control, and

WHEREAS, This document fails to provide the medical profession with a voice in policy decisions in a project which directly involves the medical profession, and

WHEREAS, Under the undefined term "national emergency" local medical control is excluded and the traditional responsibility of communities to meet their own civilian blood needs is not given proper consideration, and

WHEREAS, By this document the committee responsible for research in blood and related problems does not include representation from the American Medical Association;

THEREFORE BE IT HEREBY RESOLVED, That the American Medical Association, representing the medical profession, be urged to request proper representation in the medical control of any emergency blood program and that the need for a "National Blood Program" be further explored by the American Medical Association, and

BE IT FURTHER RESOLVED, That the principles of the Boston Agreement, pertaining to a National Emergency be adhered to, thus giving equal responsibility to the medical profession and to other medical agencies referred to in this agreement for the operation of any national blood program.

The motion for adoption of the resolution was seconded and passed.

The following resolution from the Alexandria Medical Society was read:

THAT the delegates of the Alexandria Medical Society be instructed to inform The Medical Society of Virginia of the problem concerning the Residency in Medicine at the Alexandria Hospital;

THAT FURTHER they point out that arbitrary and ill-timed decisions by the Council on Medical Education and Hospitals constitute an unfair and unwarranted threat to the system of graduate education, and a detriment to the level of medical care in any given community;

THAT FURTHER they point out that the decisions of the Council are based on generalities, and that criteria for Residency approval are vague, and that these criteria act to the disadvantage of moderate-size, non-university hospitals;

THAT they ask that The Medical Society of Virginia delegates to the American Medical Association House of Delegates be instructed to inform the American Medical Association of these facts, and to take such steps as are necessary to alter them.

In this connection the Reference Committee submitted the following resolution:

Having received the resolution from the Alexandria Medical Society and seriously considered the problem of interns and residencies in medium sized hospitals, and having similar complaints from other hospitals concerned, and

WHEREAS, This problem of internship and residencies in medium sized and non-university hospitals constitutes a serious hazard to the continuing service of those hospitals to their communities, and

WHEREAS The decisions of the Council on Medical Education and Hospitals of the American Medical Association often seem arbitrary and are not clear to the boards and staffs of the hospitals concerned,

THEREFORE, BE IT RESOLVED THAT The House of Delegates of The Medical Society of Virginia instruct their delegates to the A.M.A. to endeavor to secure a modification of procedure so as to correct the inequalities and injustices which result.

The resolution was adopted.

Dr. Marcellus Johnson's following resolution concerning the American Medical Education Foundation was presented:

BE IT RESOLVED THAT The Medical Society of Virginia endorse whole heartedly the American Medical Education Foundation, and

THAT the officers of The Medical Society of Virginia be directed to further this cause by personal effort, appointment of appropriate committees, and publications to the best of their ability, and

THAT There be a continuation of this drive on an annual basis until every doctor in Virginia is informed, interested, and has accepted the principle of annual contribution.

A motion for adoption was seconded and passed.

Considered next was the following resolution in support of the World Medical Association:

WHEREAS, The World Medical Association is an asso-

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ciation of the National Medical Association of 43 countries of the free world, and

WHEREAS, This association is the only international association which can speak for the practicing physicians of the world, and

WHEREAS, There are an increasing number of health problems being decided on an international basis, and

WHEREAS, There is an increasing need for an association to represent the practicing profession, and

WHEREAS, The American Medical Association is one of the Founder Members of The World Medical Association, and

WHEREAS, The American Medical Association is also one of the Founder Corporate Members of the United States Committee, Inc., of The World Medical Association and has urged physicians of the United States to become individual members of the United States Committee, Inc.,

THEREFORE, BE IT RESOLVED That the House of Delegates of The Medical Society of Virginia urges the members of The Medical Society of Virginia to become individual members of the United States Committee, Inc., of The World Medical Association, and thereby aid in the elevation of standards in medical education and medical care throughout the world and ensure that the opinions of the practicing physicians of the world are adequately represented before various international bodies.

The resolution was adopted.

Dr. Hundley then read the following report of the Sub-committee on Industrial Health: The Sub-Committee on Industrial Health wishes to reiterate the recommendation made in the published report to the effect that the need now exists for a full time physician as director of Industrial Health under the Commissioner of Health in the Health Department. The rapidly increasing industrialization in our state demands the services of such an individual on a full time basis, if the problem of industrial health is to be effectively managed. The resolution was adopted.

The following recommendation was then presented: It is recommended that a Liaison Committee to cooperate with the United Mine Workers' Health and Welfare Fund be appointed by the President and include representatives from the areas involved, the Medical Service Committee and the sub-committee on Industrial Health. A motion that such a liaison committee be appointed was seconded and passed.

Presented next was the following resolution of Dr. William R. Jordan:

WHEREAS The threat of socialization of the practice of medicine has been very real in our National Government during the past several administrations, and

WHEREAS This society earnestly disapproves of this proposed change in relationship of patient and physician;

BE IT RESOLVED THAT The Medical Society of Virginia urges all physicians to study the platforms of the two major political parties and the opinions of the candidates for the Presidency of the United States. They are further urged to vote for and to promote the election of the candidate who in their opinion has the soundest views on this subject of socialization of medical practice.

The resolution was adopted.

This concluded necessary action on those items recommended and referred to the House of Delegates by the Reference Committee.

The Speaker then recognized Dr. Guy Fisher, Chairman of the Nominations Committee, who submitted the following nominations: President-Elect, Dr. Vincent W. Archer, Charlottesville; First Vice-President, Dr. Kinloch Nelson, Richmond; Second Vice-President, Dr. Snowden C. Hall, Danville; Third Vice-President, Dr. W. C. Welburn, Arlington; and Executive Secretary, Mr. Robert I. Howard, Richmond. It was moved and seconded that nominations be adopted. The motion carried unanimously.

The next order of business was the election of a Speaker for the House of Delegates, and Dr. John T. T. Hundley was elected.

Election of a delegate to the American Medical Association was next considered. This was necessary since the term of Dr. J. Morrison Hutcheson expires December 31. The results, announced by the Speaker, showed the new delegate to be Dr. Carrington Williams, Sr., and his alternate, Dr. Hutcheson.

The names of the nominees for Councilors of even numbered Congressional Districts were then announced: Second District, Dr. Walter P. Adams, Norfolk; Fourth District, Dr. Wilkins J. Ozlin, South Hill; Sixth District, Dr. Frank A. Farmer, Roanoke; Eighth District, Dr. Claude A. Nunnally, Fredericksburg; and Tenth District, Dr. James W. Love, Alexandria. A motion to adopt the nominations recommended by the Nominations Committee was adopted unanimously.

The Speaker called for nominations of the General Practitioner of the Year. Dr. B. A. Hopkins announced that he had been instructed by the Virginia Academy of General Practice to place in nomination the names of Dr. Frank A. Farmer, Roanoke, and Dr. James L. Hamner, Mannboro. It was then moved, seconded, and passed that the nominations be closed. Dr. Caudill read the results of the ballots and declared Dr. James L. Hamner to be General Practitioner of the Year in Virginia.

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On behalf of the Roanoke Academy of Medicine, Dr. Charles Peterson invited the Society to meet in that city in 1953. There was some discussion as to the advisability of meeting in a city in which resides a great many members. A motion which would urge the Council to select a site other than a large city was lost. It was then moved and seconded that the Society meet in Roanoke in 1953. The motion carried.

Dr. Daniel moved that Council select the meeting place for 1954 sometime during the coming year in order to avoid conflicts in dates. The motion was seconded and passed.

It was then moved that the Study of Tuberculosis in Virginia, sponsored by the State Health Department and the Virginia Tuberculosis Association, be approved by the Society. The motion was seconded and passed.

Nominations were then announced for appointments to the State Board of Medical Examiners: First District—Dr. Waverly R. Payne, Dr. A. B. Gravatt, and Dr. Paul C. Pearson; Second District—Dr. Russell M. Cox, Dr. A. Brownley Hodges, and Dr. Bryan Grinnan; Fourth District—Dr. Thomas G. Hardy, Dr. W. Holmes Chapman, and Dr. Fletcher J. Wright, Jr.; Seventh District—Dr. Chester L. Riley, Dr. Noland M. Canter, and Dr. Alex F. Robertson; Ninth District—Dr. George B. Setzler, Dr. Harry M. Hayter, and Dr. James P. Williams; Tenth District—Dr. T. B. McCord, Dr. John C. Watson and Dr. Raymond Schwartz. It was moved and seconded that the nominations be approved. The motion passed.

There being no further business, the House of Delegates adjourned.

REPORTS NOT PREVIOUSLY PUBLISHED

REPORT OF COMMITTEE ON TUBERCULOSIS

Dr. C. L. Harrell has been in touch with Dr. Joseph E. Barrett, Commissioner of Mental Hygiene, during the summer concerning patients in mental hospitals who have tuberculosis.

With the cooperation of Dr. William E. Apperson further studies are to be made of the needs and benefits to be obtained by a more active treatment program. Dr. Apperson hopes to begin this study in October, with the view of possibly starting treatment in the institutions and at the same time try to work out some plan whereby a full time or part time consultant in diseases of the chest can be obtained.

The Committee was requested on September 26, 1952 to examine and approve the proposed study of tuberculosis control in Virginia, sponsored jointly with the Virginia Tuberculosis Association and the State Health Department.

The Committee approves this study and it is recommended that the Society consider the proposal and if approved, communicate with Dr. Ennion S. Williams, Chairman of the Steering Committee, Life Insurance Company of Virginia Building, Richmond, Virginia.

GEORGE A. WELCHONS, M.D., *Chairman*

SUPPLEMENTAL REPORT OF THE MEDICAL SERVICE COMMITTEE

The Chairman of the Sub-committee on Indigent Care, Dr. H. B. Mulholland, is currently serving as chairman of a committee appointed by the A.M.A. to study this problem. This committee is investigating a number of plans for the care of the indigent, including the plan in effect in the city of Richmond which is conducted in conjunction with the out-patient department of the Medical College of Virginia. Other programs for indigent care are in effect in the state, such as that in Roanoke, in which a city physician serves in the Welfare Department and members of the Roanoke Academy of Medicine staff a full specialty clinic serving the indigent of the city. The report of the A.M.A. committee is to be made available in April 1953 and the Medical Service Committee does not recommend any specific approach to the problems regarding the medical care of the indigent at this time.

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A.M.A. PUBLIC RELATIONS CONFERENCE

The Fifth Annual Medical Public Relations Conference of the American Medical Association was held in Denver on Monday, December 1.

Built around the theme "Mutual Understanding—The Key to Better Public Relations", the Conference attracted some 400 physicians and lay executives, who, almost without exception, agreed that this was A.M.A.'s best effort yet.

Dr. George Lull, Secretary of the A.M.A., delivered the address of welcome, and denounced those physicians who are guilty of flagrant violations of the Medical Code of Ethics. He called for firm action on the part of county societies in such instances.

The keynote address was made by Dr. Edward J. McCormick, President-Elect of the A.M.A., who cited the need of a bigger and better PR program in every society, and pointed out the necessity of a continuing fight against socialized medicine. He read a number of complaints received from persons in all walks of life, and emphasized the fact that these complaints are not always false. He further stated that from these complaints stem the threat of socialized medicine.

Dr. McCormick then lauded the progress medicine has made in its PR efforts during the past several years. It was pointed out that in 1948, sixty night call systems were in operation over the nation. By 1952, six hundred and fifty (650) systems were operating. There has also been an encouraging increase in the number of people covered by hospitalization insurance since 1948. At that time 48% of our population were covered. By 1951, 60% were covered.

Continuing, Dr. McCormick brought out the fact that the first Grievance Committee was appointed about five years ago, and now committees exist in every state. He stated that the United States has more doctors, more medical graduates, and the best Doctor-Patient ratio in the world. The problem of distribution is gradually being solved.

In a militant call for action, the President-Elect called for component societies to exercise responsibility and move aggressively against those members who overcharge patients possessing medical and surgical insurance. This tendency to overcharge must be stopped.

A dramatic skit was then presented by the Denver University Players, and pointed out the right and wrong ways of taking care of patients in the waiting room and in the doctor's office. It was humorous, different, and highly instructive.

Next on the program was Dr. H. Gordon MacLean, Oakland, California, who discussed the matter of fees. He stated that more often than not, fees are a prominent cause of a breakdown in Doctor-Patient relationships. He pointed out that no physician should apologize for charging a reasonable fee. However, the physician should seek to bring out the fact that there is an economic side of medicine. All that is needed, according to Dr. MacLean, is an opening to bring the matter up. The A.M.A. plaque was especially recommended.

Dr. Otto N. Glesne, Fort Dodge, Iowa, spoke on proper indoctrination of medical assistants and cited the growing interest of this particular group. He thought each component society should hold a yearly meeting for the benefit of the assistants.

Many reasons were advanced by Dr. W. Clark Bailey, Harlan, Kentucky, as to why physicians should interest themselves in legislative matters. It is necessary that we make sure that federal agencies do not dictate to the government. Rather, agencies should be servants of the government. Despite this, approximately 90% of all bills introduced during the last Congress were sponsored by agencies.

Dr. Charles H. Richardson, Macon, Georgia, asked physicians to put themselves in the patient's place, and think how they would feel if a bill were received itemizing the costs. Itemizing bills, according to Dr. Richardson, is a real step towards better medical public relations.

Two excellent panel discussions featured the afternoon session of the Conference, the first dealing with cooperative physicians-hospital PR programs, and the second with building a better understanding with future M.D.'s.

Concerning a physician-hospital PR program, it was brought out that a good nurse recruitment drive is most important. Local health councils and the Woman's Auxiliary can do much to insure the success of such a drive.

The second panel concentrated on the Student A.M.A. and offered many suggestions how component and state societies could help these future

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physicians. Meetings could well be open to them and certain social activities might be planned. In some areas programs have been arranged for students' wives.

It was also believed that medical schools should concentrate more on the physician's responsibility to society and self and to the moral code of medicine.

Mr. Leo Brown, Director of Public Relations for the American Medical Association, then presented A.M.A.'s suggestions for "The Year Ahead." Their program emphasizes the five following points: (1) Develop better understanding of the public with regard to fees; (2) Develop better understanding of physician supply; (3) Better understanding of the A.M.A.; (4) Encourage liaison with other groups; (5) Encourage physicians to practice sound Public Relations.

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BOOK ANNOUNCEMENTS

The Origin of Life and the Evolution of Living Things. An Environmental Theory. By OLAN R. HYNDMAN, B.S., M.D., F.A.C.S. Philosophical Library, New York. 1952. xxi-648 pages. Cloth. Price $8.75.

New and Nonofficial Remedies. Containing Descriptions of the Articles which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1952. Issued under the direction and supervision of The Council on Pharmacy and Chemistry, American Medical Association. 1952. Philadelphia, J. P. Lippincott Company. xlvi-838 pages. Cloth. Price $3.00.

A 40 Year Campaign against Tuberculosis. By LOUIS I. DUBLIN, Ph.D., Second Vice-President and Statistician, Metropolitan Life Insurance Company, New York. Published by Metropolitan Life Insurance Company. 1952. v-115 pages. Cloth.

Correlative Neuroanatomy and Functional Neurology. By JOSEPH J. McDONALD, M.S., M.Sc.D., M.D., Professor of Surgery, Columbia University; etc. And JOSEPH G. SCHUSID, A.B., M.D., Attending Neurologist, St. Vincent's Hospital, New York. Sixth Edition. Lange Medical Publications. University Medical Publishers, Los Altos, California. 1952. 263 pages. Price $4.00.

Pardon My Sneeze. By MILTON MILLMAN, M.D., San Diego, California, Fellow American Academy of Allergists and Member American Academy of Allergy. Frye & Smith, Ltd., San Diego. 1952. 217 pages. Illustrated.

Brain Surgeon. The Autobiography of WILLIAM SHARPE, M.D., New York City. The Viking Press, New York. 1952. xvi-271 pages. Cloth. Price $3.75.

Progress in Fundamental Medicine. By PAUL CANNON, University of Chicago; J. A. CUNNINGHAM, University of Alabama; PAUL KLEMPERER, Mt. Sinai Hospital, New York; ALBERT KLIGMAN, University of Pennsylvania; G. K. MALLORY, The Mallory Institute; TRACY B. MALLORY (deceased), The Massachusetts General Hospital; J. C. PATERSON, University of Western Ontario; L. B. STODDARD, University of Kansas; W. KENNETH CUYLER, Duke University, J. P. WYATT, St. Louis University. Edited by J. F. A. McMANUS, University of Virginia. Lea & Febiger, Philadelphia, 1952, 316 pages, with 74 illustrations and 2 colored plates. Cloth. Price $9.00.

Annotated Bibliography of Vitamin E. 1950 and 1951 Volume II. Compiled by PHILIP L. HARRIS and WILMA KUJAWSKI of The Research Laboratories of Distillation Products Industries, Rochester, N. Y. 106 pages. Price $2.00

The Low Fat Diet Cook Book. By DOROTHY MYERS HILDRETH and EUGENE A. HILDRETH, M. D. Introduction by Francis C. Wood, M.D. Medical Research Press, New York. 1952. xi-148 pages. Cloth. Price $2.95.

Therapeutic Meal Plans. A New Diet Manual. Prepared by the Department of Dietetics and Nutrition, University of Kansas School of Medicine. Edited by VIRGINIA TOEWS, BERDENA ROSENOW, and RUTH GORDON, Dietitians. University of Kansas Press, Lawrence, Kansas. 1952. 111 pages. Cloth. Price $3.00.

Synopsis of Pathology. By W. A. D. ANDERSON, M.A., M.D., F.A.C.P., Professor of Pathology, Marquette University School of Medicine; Pathologist, St. Joseph's Hospital, Milwaukee, Wis. Third Edition. St. Louis, The C. V. Mosby Company. 1952. 788 pages with 334 text illustrations and 13 color plates. Cloth. Price $8.00.

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EDITORIAL

Beverley Randolph Wellford, 1797-1870

ABOUT the middle of the last century there occurred three events of great moment to the medical profession of Virginia; (1) the founding of the American Medical Association, (2) the reorganization of the Medical Society of Virginia on a state wide basis, and (3) the reorganization of the Medical College of Virginia as a ward of the state. The medical profession was coming of age in Virginia. In each of these projects Dr. Beverley Randolph Wellford played an important part.

The first meeting of the American Medical Association was held May 5, 6, and 7, 1847 at Philadelphia when Nathaniel Chapman was elected president. The fifth annual session was at Charleston, South Carolina where Dr. Beverley Randolph Wellford of Fredericksburg, Virginia was elected vice-president. At the next meeting May 4, 5, 6, 7, 1852 in Richmond, Dr. Wellford became the sixth president. His presidential address the following year was a notable one in which he reviewed the history, aims and benefits of the Association. He stressed reforms in medical education, the separation of teaching and licensing, and the need of vital statistics. Even today this address is quoted (History of American Medical Association 1847-1947, p. 59).

BEVERLEY RANDOLPH WELLFORD, M.D.

The Medical Society of Virginia has had a checkered history. On December 15, 1820 seventeen physicians of Richmond and Manchester met and formed themselves into the "Medical Society of Virginia". They met monthly for their mutual improvement and one of the first resolutions they adopted was "that no person holding in part or whole any patent medicines, or remedies for diseases, shall be eligible to a seat in this society; and any member who may hereafter become interested directly or indirectly,

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in any such patent, shall thereby absolutely forfeit his seat, and the word 'expelled' written opposite his name in the record book." In 1824 the Society was incorporated by the General Assembly of Virginia and in the same year the Society ceased to meet, for some unknown reason. In 1841 the Society was revived, the original constitution was readopted and new officers elected. The Society remained essentially a local society, but as members outside of the city were admitted to membership, complaints began to arise that the Richmond doctors controlled the society. Since the Society met once a month in Richmond, it could hardly be otherwise. By 1846 definite steps were taken to remedy the situation. Another bone of contention was the advisability of having a journal, which was settled, at least partially in 1851 when publication of the *Stethoscope and Virginia Medical Gazette* was begun. In 1852 Dr. Wellford was elected the first president of the reorganized Medical Society of Virginia and annual sessions replaced the monthly meetings.

The reorganization of the Medical College of Virginia provoked an even more bitter controversy. The teaching of medicine in Richmond began in 1838 under the charter of Hampden-Sydney College. It was a common practice of the time for a proprietary medical college to borrow the charter of a liberal arts college in order to confer a degree. The faculty of the medical school managed its own affairs without help or hindrance from the trustees. For fifteen years this arrangement worked smoothly and then a division arose over filling a vacancy in the faculty. Some "outside" Richmond doctors proposed the name of one not acceptable to the faculty. The matter was taken up with the trustees who elected the candidate of the outsiders. The issue was aired in the press, both lay and medical, with much name calling. Finally, the fight was carried to the Legislature which dissolved the connection with Hampden-Sydney and gave the Medical College a charter of its own. The agitation continued for several years and centered around Dr. Wellford who was now both a member of the Board of Visitors and of the faculty.

Dr. Robert Wellford (1753-1823), the American progenitor, and himself the son of a doctor, was the head of a long line of Virginia doctors that extends to the present time. He came to this country with the First Royal Grenadiers. His coming to Fredericksburg is an interesting story. It seems that after the battles of Brandywine and Germantown the wounded American prisoners were so badly treated by a British army surgeon that General Washington complained to General Howe, who after investigation put Dr. Wellford in charge of their treatment. A great improvement followed and Dr. Wellford gained the friendship of Col. John Spotswood, one of the prisoners, and of General Washington. At the same time he gained the enmity of the British surgeons which was so great that the situation became intolerable and led to Dr. Wellford's resignation from the British Army. When the way opened up for Col. Spotswood's return to Virginia, General Washington suggested that Dr. Wellford accompany him and gave the doctor a number of letters of introduction to his friends in Fredericksburg.

Dr. Robert Wellford greatly prospered in Fredericksburg and became a leading citizen. When the whiskey rebellion broke out (1794) Washington made him Surgeon General of the army that was raised to suppress the uprising. He married Catherine Yates a descendant of Edward Randolph of Turkey Island. Two of their sons, Horace (1790-1828) and Beverley Randolph (1797-1870) and five of their grandsons became physicians.

Beverley Randolph Wellford (1797-1870) was born in Fredericksburg on July 29, 1797. After studying under his father he attended two sessions at the University

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of Maryland and graduated in the year 1817 with the degree of M.D. In the same year he received a certificate from the Baltimore Medical Society and Institute. He then returned to Fredericksburg and entered into active practice with his father. For two years, however, 1818-19 and 1819-20, Dr. Wellford returned to Baltimore and attended the Winter Sessions of the Medical School of his Alma Mater.

Like his father, the young doctor loved his profession and was devoted to his patients, no sacrifice being too large, no trouble too great, if, by it, he could benefit any of those who had entrusted themselves to his care. He subscribed to and read assiduously the London Lancet and the Medico Chirurgical Review.

In 1832 when an epidemic of Asiatic cholera invaded this country, he went to New York to help combat the disease and by observation and experience to fit himself to better serve the people of his own community. Returning safely to Fredericksburg he at once set about providing an abundant supply of what were then considered the best cholera remedies. In this he was assisted by several young men who were studying under him.

Although medicine was his chief concern, as a good citizen, Dr. Wellford had other interests. He was a "Justice of the Corporation" and a member of the commission appointed in 1849 to contract for a new Court House, and later supervised its construction. He was a partner in the great stage line known as Peck, Wellford & Company and was first president of the Fredericksburg & Gordonsville Railroad.

Dr. Wellford's fame spread beyond the Rappahannock country, and justly so. In 1851 he was elected president of the Medical Society of Virginia and in 1852 he was president of the American Medical Association. He was tendered a professorship in the medical department of the University of Virginia which he declined, but, when the Medical College of Virginia became an independent school in 1854, he was named in the act of incorporation as a member of its first Board of Trustees and, in the spring of that year, he was elected to and accepted the chair of Materia Medica and Therapeutics there. He held this position until his retirement in 1868 when he was elected Professor Emeritus. During the war he was in charge of one of the numerous Confederate hospitals in Richmond. Dr. Wellford died of apoplexy after a protracted illness on December 27, 1870. He was married twice. His first wife was Miss Betty Burwell Page, who had one daughter and died the second year after her marriage. His second wife was Miss Mary Alexander who bore him seven sons and two daughters. Two of these sons became prominent physicians, John Spotswood (1825-1911) and Armistead Nelson Wellford (1826-1884). The latter was the father of Dr. Armistead Landon Wellford (1857-1933) and the grandfather of Dr. Beverley Randolph Wellford of the present generation.

Connecticut's Remarkable Maternal Mortality

FOR years Connecticut has been noted for its low maternal mortality. It has consistently maintained a mortality below that for the nation as a whole and in many years it has led all states in low maternal death rates. The explanation that is usually given for such a record is that it is a small State with a homogenous population and that most of the deliveries take place in hospitals. A generation ago it was widely taught that hospital deliveries were more hazardous than home deliveries. The Connecticut experience certainly disproves that dictum.

In 1946 when maternal deaths had fallen to fewer than one to 1000 live births, the Connecticut Medical Society decided that one half of these were preventable, and

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appointed a permanent Committee on Maternal Mortality and Morbidity to see what could be done about it. A report of this Committee appears as the leading article of the November 1952 issue of the *Connecticut State Medical Journal*. The maternal mortality for 1950 was 0.4 per 1000 live births. More than 99% of Connecticut's mothers were confined in hospitals. Each death was carefully analyzed by the Committee and one-half of them were considered preventable; 33% by the attendant, 14% by the patient, and 3% undetermined. The Committee makes six specific recommendations: (A) Continued education of the patient and physician in the value of early and adequate prenatal care; (B) A thorough study and analysis of maternal morbidity by the medical staff of each hospital; (C) Improved medical staff organization in all hospitals; (D) Written rules and regulations to assure optimum medical care for all obstetrical patients; (E) Earlier and more frequent use of medical or obstetrical consultation for complications of pregnancy; (F) Accurate and complete records on all maternity patients.

SOCIETIES

The Albemarle County Medical Society

Held its regular meeting at Hotel Albemarle, Charlottesville, December 4, with Dr. G. T. Mann, chief medical examiner for Virginia as the speaker. His subject was "Problems of the Medical Examiners System". Supper was served later.

Danville-Pittsylania Academy of Medicine.

At the November meeting of the Academy, the following officers were elected for the coming year, and took office at the December 12 meeting: President, Dr. John R. Eggleston, Danville; vice-president, Dr. Betty Whitehead, Chatham; and secretary-treasurer, Dr. Walter C. Fitzgerald, Danville.

The Fairfax County Medical Society

Met on November 11th, at the home of Dr. Emanuel Newman at Falls Church.

Dr. Muilenberg presented a film made by the United States Army, showing the operation for sympathectomy.

Mrs. Costello of the Instructive Visiting Nurse Society of Fairfax County spoke to the group about the work of the visiting nurses in the county.

The plans for the annual dinner meeting were discussed. It will be held on November 26th at the Belle Haven Country Club.

ALICE H. KIESSLING,
Publicity Committee

Lynchburg Academy of Medicine.

The regular monthly meeting of the Academy was held as a dinner meeting at the Virginian Hotel on Monday, November 10th.

The program was a Symposium on Pain, presented by Dr. David Wilson, with Dr. Walter Klingman, and Dr. Daniel T. Watts of the University of Virginia.

EDWIN A. HARPER,
Secretary.

Montgomery County Medical Society.

The fall meeting of the Society was held at Christiansburg, Virginia on November 5. Twenty-five members attended. Dr. Ford Lucas of Blacksburg, President, presided.

Dr. Dave Phlegar of Blacksburg gave a report of the activities of the House of Delegates at the State Society meeting in Richmond. The Film "Without Fear", which had received considerable comment from professional groups, was shown.

Four new members were elected to membership.

DANIEL D. CHILES,
Secretary

Hampton Medical Society

Is the name adopted by the old Elizabeth City County Medical Society at its meeting at Dixie Hospital in Hampton on November 24. This change was made as there is no longer an Elizabeth City County, this having been consolidated last summer to become the city of Hampton. Dr. Paul J. Parker and Dr. Robert H. Wright, Jr., are president and secretary, respectively. Two new members were elected at this meeting.

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Warwick-Newport News Medical Society.

At a recent meeting, the Warwick County Medical Society changed its name to the above that it may conform to the newly established governmental units of the Peninsula. The officers elected for 1953 are: President, Dr. O. Watts Booth; vice-president, Dr. W. H. Kretz; and secretary-treasurer, Dr. W. Ward Anderson. All are of Newport News.

Richmond Academy of Medicine.

At the meeting of the Academy on December the 9th, Dr. Guy W. Horsley presiding, officers were elected for the coming year, these to take office at the first January meeting. Dr. C. L. Outland will succeed to the presidency, and Dr. Benjamin W. Rawles, Jr., was elected president-elect. Dr. Wellford C. Reed and Dr. J. Robert Massie were named vice-presidents. Dr. Linwood Ball and Dr. Charles Nelson were selected as new members of the board of directors.

The Wise County Medical Society

Met at Hotel Norton on November 12, in a dinner meeting. Twenty-nine enjoyed the late Wyeth talkie on the recent national convention of the Academy of General Practice and heard fine addresses by Dr. R. N. Shelly on "Some Problems of the Acute Abdomen", and Dr. D. A. Jones on X-ray interpretation.

Four new members were elected. Drs. C. H. Henderson and E. P. Cox, both of Norton, were elected to the Board of Censors, succeeding Drs. L. N. Waters and Dahar Cury, both of whom are taking additional training in their specialties.

T. J. TUDOR, *Secretary.*

NEWS

National Rural Health Conference in Roanoke.

The Council on Rural Health of the American Medical Association looks forward to holding its Eighth Annual National Conference on Rural Health at Roanoke, Virginia, February 26-27-28. In making arrangements for the meeting we have already experienced the warmth of Southern hospitality for which Virginia and the region is famous. We have had fine cooperation from Dr. John Boyd, Jr., Chairman, Medical Service Committee, Robert Howard, Executive Secretary, Edgar A. Fisher, Jr., Director, Virginia Council on Health and Medical Care, and many others. For all of this we are indeed grateful. We feel assured of a full measure of cooperation from all the physicians of the area as well as the lay groups and with this the final success of the most effective rural health conference yet held.

The first four of the National Conferences on Rural Health were held in Chicago but the last three have been held out in the regions of the country, one at Kansas City, one at Memphis and the last one at Denver. We do this so that we may gain first hand knowledge of the health problems of the people from those who live in the areas. We seek to get advice and counsel as to what can best be done about these problems. There is always a wealth of experience in an area which it is our good fortune to draw upon, and we hope the physicians of Virginia and the surrounding states will not only be in attendance themselves but will get leading farm laymen to attend.

Through the years we have enjoyed the confidence, assistance and support of such outstanding farm organizations and agencies as the American Farm Bureau and its constituent state organizations, the National Grange and its affiliated state Granges, the National Milk Producers Federation, the Extension Services of the Land Grant Colleges, the Farm Foundation, and the Association of Farm Journal Editors. We hope that all rural groups, whether or not they are affiliated with one of the above groups, will be present, and physicians can help us by inviting them. We would especially like to get rural ministers from the area.

The program has a minimum number of speakers. Those who will speak, however, will deal with important topics such as dental health, paying for medical care, problems of prepayment insurance, problems of health and medical care in the South, and a recital of successful experiences from people and communities across the nation on how they have solved a particular problem.

There will be ample time and opportunity provided for those in attendance to raise questions on state problems. In fact, there has been almost as much time provided for the audience to discuss its

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problems and to make suggestions as there has been set aside for the speakers.

We therefore, thank the physicians in advance for their cooperation in getting the rural leaders to attend the conference and we welcome each of the physicians to be with us.

F. S. CROCKETT, M.D., *Chairman,*
Council on Rural Health, A.M.A.

The World Medical Association,

In conjunction with the Pan American Medical Confederation, will meet in Richmond, April 23-25, with headquarters at the Jefferson Hotel. Dr. Louis H. Bauer, president of the American Medical Association and secretary-general of the World Medical Association, is calling its first western hemisphere conference of the two organizations. A. H. Robins Company, Inc., of this city has made a grant in support of the conferences on the occasion of its 75th anniversary as a maker of prescription specialties. Open house, with luncheon at the dedication of the new plant of this Company. will add to the pleasure of those attending the conferences. Tours, sightseeing and other entertainments in Richmond and in nearby places will add to the interest of the meetings. The sessions on the second day will be held at the Medical College of Virginia.

New Dean of the University of Virginia School of Medicine.

Dr. Thomas Harrison Hunter, associate dean of Washington University School of Medicine, St. Louis, Mo., has been selected dean of the University of Virginia School of Medicine by action of the Board of Visitors. President Colgate W. Darden announced that Dr. Hunter will arrive February 1, 1953, to fill the position which Dr. Vernon W. Lippard has resigned to become dean of medicine at Yale University from which he graduated in 1929.

Dr. Hunter was born in Chicago and educated at Belmont Hill School in Boston before entering Harvard University, where he majored in psychology and received an A. B. degree cum laude in 1935. He was awarded a Henry Fellowship for study in England where he attended Cambridge University from 1935 to 1938. He began his medical studies at Cambridge and in his third year transferred to Harvard where he received an M. D. degree cum laude in 1940.

At Presbyterian Hospital in New York Dr. Hunter served an internship, two years of assistant residency and one year of chief residency. He began his teaching when he became instructor in medicine on the staff of Columbia University in 1945.

Seven years after graduation from medical school, in September 1947, Dr. Hunter was appointed assistant dean of the Washington University School of Medicine and assistant professor of medicine. A year later he was named chief of the medical service at Homer G. Phillips Hospital in St. Louis. He was appointed associate professor of medicine in July 1951, and associate dean last March.

Dr. Hunter has contributed numerous publications to medical journals on his studies of subacute bacterial endocarditis and its treatment with antibiotics. He is the author of a chapter on endocarditis in Cecil's Textbook of Medicine, 1951 edition.

The Watts Hospital,

Durham, North Carolina, will hold its tenth annual Medical and Surgical Symposium on February 11 and 12, at the Carolina Theatre in that city. There will be a Clinico-Pathological Conference on the first morning and a Panel Discussion that evening on Gastritis from the Viewpoint of Various Specialties. At the afternoon session on the first day and at the morning and afternoon sessions on the second day various subjects will be discussed by outstanding men from different sections of the country.

Virginia Council on Health and Medical Care.

Aubrey D. Gates, Field Director of the Council on Rural Health of the American Medical Association will be the guest speaker at the annual meeting of the Virginia Council on Health and Medical Care. The meeting will be held on Monday, January 12, 1953 at 1:30 p.m. in the auditorium of the Richmond Academy of Medicine. It is hoped that as many physicians as possible will be able to attend this meeting. All are welcome.

For additional details please contact the Virginia Council on Health and Medical Care, 102 East Franklin Street, in Richmond.

Dr. H. Ward Randolph,

Formerly of Richmond but who has been living for the past several years at his home on the Great Wicomico River in the Northern Neck, has returned to Richmond and is at 2904 Chamberlayne Avenue.

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Southern Electroencephalographic Society.

Dr. Isadore S. Zfass, Richmond, was elected president of this society at its meeting in Miami at the time of the Southern Medical Association meeting. Dr. Samuel C. Little of Birmingham, was elected vice-president, and Dr. Don Winfield of Memphis secretary-treasurer.

The Richmond Chapter of The American Heart Association

Will sponsor a symposium on Cardiovascular Diseases to be held on the afternoon and evening of February 6, 1953 in Richmond. The afternoon speakers will be Doctor Gordon B. Myers of Detroit, who will speak on "The Pitfalls in the Electrocardiographic Diagnosis of Myocardial Infarction", Doctor Robert L. Levy of New York City, who will speak on "The Management of the Patient with Coronary Heart Disease," and Doctor George A. Perera of New York City, who will speak on "Hypertension". The evening speaker will be Doctor Howard B. Sprague of Boston, who will speak on the general subject of heart disease with the presentation designed to be of interest to both lay and professional individuals.

A cordial invitation is extended to all physicians.

The Virginia Society of Ophthalmology and Otolaryngology

Plans to hold its next meeting at the Homestead, Hot Springs, Va., May 4th and 5th, and a pleasant meeting and excellent program will be enjoyed. Dr. A. D. Morgan of Norfolk is president, and Dr. G. S. Fitz-Hugh of Charlottesville is secretary-treasurer.

Assistant Medical Director, Richmond School Board.

Dr. George G. Ritchie, Jr., of Richmond, has been named by the Richmond City School Board as assistant medical director to work with Dr. C. L. Outland, director. Dr. Ritchie is a graduate of the Medical College of Virginia, class of '50, and interned at the Medical College of Virginia Hospitals. He will be on a part time basis.

Dr. Harry M. Hayter,

Abingdon, captured the "challenge bowl" November 28, in the National Foxhunters' Association show at Gatlinsburg, Tenn.

Dr. E. G. Gill,

Roanoke, by invitation addressed the New Jersey Ophthalmological Society at Princeton, on December 4. He gave an illustrated talk on Recent Advances in Cataract Surgery.

The First World Congress on Fertility and Sterility

Will be held on May 25-31, 1953 at the Henry Hudson Hotel in New York City. This Congress is sponsored by the International Fertility Association with the cooperation of the American Society for the Study of Sterility.

Twenty-three scientific sessions are to be held, which will embrace the entire field of fertility and and sterility, including sessions dealing with socio-economic factors, psychosomatic aspects, and artificial insemination. The sessions will be conducted in English, French and Spanish, with the use of earphones and simultaneous translations, as in the United Nations meetings. In addition to the scientific sessions there will be medical round table discussions, question and answer periods, scientific exhibits and motion pictures.

It is anticipated that 1800 scientists from 51 countries will attend the Congress, making it the world's largest medical meeting devoted to problems of reproduction. This Congress will facilitate the exchange of ideas and information among doctors from the various countries, dealing with the very latest findings in fertility studies.

Since seats at the Congress will be at a premium, it is suggested that those who plan to attend write as soon as possible to the Chairman of the Local Arrangements Committee, 1160 Fifth Avenue, New York 29, New York, for advance registration.

Motion Pictures Available to Local and Other Medical Societies.

The Committee on Medical Motion Pictures of the American Medical Association has announced the publication of a new revised film list which includes 78 medical films not readily available from other sources.

This list is available for distribution, and a copy may be obtained by writing the Committee on Medical Motion Pictures, American Medical Association, 535 North Dearborn Street, Chicago 10.

News from the Medical College of Virginia, Richmond.

Dr. William Branch Porter, Professor of Medicine, was honored on October 23 by his former residents,

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in founding the William Branch Porter Society. A scroll presented to Doctor Porter read: "In recognition of his many years of devoted service, unfailing interest, and inspirational teaching as professor of medicine at the Medical College of Virginia, we, his former residents, honor our esteemed teacher . . . by founding the William Branch Porter Society."

Dean John B. Truslow and Associate Dean George W. Bakeman of the school of medicine, Dr. Kinloch Nelson, Director of Continuation of Education, and Dr. Edward M. Holmes, Jr., Professor of Community Medicine, attended the annual meeting of the Association of American Medical Colleges in Denver.

Gifts and grants since July 1, the beginning of the fiscal year, total $227,635.88.

A number of faculty members attended and participated in the meetings of the Southern Medical Association in Miami in November.

Postgraduate Course in Diabetes and Basic Metabolic Problems.

The first Postgraduate Course in Diabetes and Basic Metabolic Problems to be conducted by the American Diabetes Association will be offered under the direction of Charles H. Best, C.B.E., M.D., F.R.S., Director of the Banting and Best Department of Medical Research of the University of Toronto, on January 19, 20, 21, 1953, at the University of Toronto, Canada.

Developed by the Association's Committee on Postgraduate Education, under the chairmanship of Edward L. Bortz, M.D., the Course will have as its Clinical Director, Ray F. Farquharson, M.B., Professor of Medicine of the University of Toronto, and Andrew L. Chute, M.D., Professor of Pediatrics of the University of Toronto, will act as Associate Clinical Director.

Over thirty lectures and round-table discussions have been planned as well as a social evening. The Course is open to non-member physicians as well as members of the American Diabetes Association, but the number of registrants will be limited to 100. Fees are $20 to members, $40 to non-members. Details of the three-day program and registration and hotel information may be obtained from J. Richard Connelly, Executive Director, American Diabetes Association, 11 West 42nd Street, New York 36, N.Y.

Dr. F. L. McDaniel Resigns.

Dr. McDaniel has resigned his position as assistant to the commissioner of the State Department of Mental Health and Hospitals to accept a position with the Central Inspection Board of the American Psychiatric Association. He had served for the past four years in this position in Dr. Joseph E. Barrett's Department.

Dr. John T. T. Hundley,

Lynchburg, immediate past president of The Medical Society of Virginia, will serve as chairman of a special 150-member committee to evaluate and interpret for the public the 1952 "Study of Tuberculosis in Virginia". Dr. Roscoe P. Kandle, former field director of the American Public Health Association, who has been directing the State-wide survey will prepare a report of findings and a series of recommendations for an improved tuberculosis control program in the State. Dr. Ennion S. Williams of Richmond heads a 11-man steering committee which serves as a sort of board of directors for the study.

Joint Meeting in Atlanta.

The Atlanta Graduate Medical Assembly and Southeastern Section of the American College of Surgeons will meet simultaneously in Atlanta on February 23, 24, and 25, it has been announced by Dr. Mark S. Dougherty, Chairman of the 1953 A.G.M.A. meeting.

Heading the arrangements for the American College of Surgeons is Dr. William G. Hamm, of Atlanta. Reservations for this joint meeting can be made by writing Mrs. S. R. Roberts, Executive Secretary, Atlanta Graduate Medical Assembly, 15 Peachtree Place, N. W., Atlanta.

Many noted guest speakers will address the meeting and symposia and important medical developments will be presented. The completed program will be announced at a later date. A.G.M.A. meeting acceptable for post-graduate credit by American Academy of General Practice.

Dr. Dougherty stressed the importance of early registration. He further stated that the registration fee of $10.00 will be refunded up to one week prior to the start of the meeting if notification is received.

American Medical Association—Clinical Session.

There was a large attendance at the sixth annual

clinical session of the A.M.A. in Denver, December 2-5, and the scientific exhibits covered a wide range of subjects. Special color television programs, sponsored by Smith, Kline and French, were given throughout the meeting.

As for the past five sessions, the General Practitioner of the Year was selected from the names submitted by the various State societies, Dr. John M. Travis, seventy-five year old physician of Jacksonville, Texas, was named for this honor.

Essay Contest.

The Mississippi Valley Medical Society announces its annual Essay Contest—cash prize of $100—open to members of the American Medical Association who are residents and citizens of the United States. Essays are to be submitted not later than May 1, 1953. Details may be secured from Harold Swanberg, M.D., Secretary, Mississippi Valley Medical Society, 209-224 W.C.U. Building, Quincy, Illinois.

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OBITUARIES

Dr. James Washington Reed,

Well known general practitioner of Norfolk, died September 23. Born in King William County, Virginia, he was educated at West Point Academy in Virginia, William and Mary College, Rush Medical School, University of Illinois, then attended the Medical College of Virginia, where he graduated in June 1912.

He interned at St. Vincent's Hospital, then went to Appalachia to practice medicine. He went to Ocean View to practice in 1914, where he continued to practice until his death. From 1914 to 1917, he served as Norfolk County Health Officer. He served on the Norfolk City Council for three terms and was Mayor of the City from 1944 to 1946.

He was active in church, was a member of Fraternal Organizations, was active in Civic and Community activities and a member of his local and State medical societies.

The Norfolk County Medical Society passed the following resolutions on his death:

WHEREAS the Profession has sustained a great loss,

BE IT RESOLVED: That we, the Members of the Norfolk County Medical Society, extend to his family our deepest sympathy.

BE IT FURTHER RESOLVED: That these resolutions be recorded in the minutes and copies be sent to the family and the VIRGINIA MEDICAL MONTHLY.

Committee: W. H. WHITMORE
R. M. REYNOLDS
C. L. HARRELL, *Chairman*

Dr. Robert Washington Sturgis,

Norfolk, who had been active in medicine for fifty-six years, died on November 17, as he was leaving his home. He was a native of the Eastern Shore, Virginia, attended William and Mary College, and received his medical degree from the University of Maryland in 1896.

Following thirty-three years of private practice, he was full-time physician with the Ford Motor Company for eleven years. Following another industrial position with the Smith-Douglass Fertilizer Company for six years, he had been in charge of the Mobile Unit of the Tidewater Regional Blood Center of the American Red Cross from its beginning.

He was a member of the Norfolk County Medical Society, The Medical Society of Virginia of which he was also a Life member, and the American Medical Association.

He is survived by his wife, his married daughter, and a sister.

The Norfolk County Medical Society adopted resolutions of appreciation of the life of Dr. Sturgis.

Dr. Reid White, Jr.,

Of Lexington, died December 4, in a New York Hospital. He was fifty-two years of age and had graduated in medicine from the University of Pennsylvania in 1926. After completing his internship in Philadelphia, he returned to Lexington and practiced with his father until his death in 1931. He then became physician to Washington and Lee University

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which position he held until his retirement on account of his health last summer. He served in the Army Medical Corps for two years during World War II. His wife and two children survive him.

Dr. Burbridge S. Yancey,

Prominent internist of Harrisonburg, died November 9 of a coronary occlusion. He was fifty years of age and graduated from the University of Virginia, School of Medicine in 1926. He had been a member of The Medical Society of Virginia for twenty-five years.

Dr. Elbert B. Talbot,

Richmond, died November 15 after being in bad health for sometime. He was seventy-one years of age and had graduated from the Medical College of Virginia in 1911. Shortly thereafter he joined The Medical Society of Virginia. His wife survives him.

Dr. Basil E. Strode,

Richmond, died November 26 at Veterans Hospital at Kecoughtan. He was sixty-four years of age and a graduate of the Medical College of Virginia in 1912. He interned at New York hospitals and practiced for a time in Amherst County before locating in Richmond. He saw service in the Army Medical Corps during World War I. He is survived by three sisters.

Dr. Benjamin C. Moomaw,

Who had practiced in Roanoke for many years, died November 19, at the age of seventy-eight. He had graduated from the University of Virginia School of Medicine in 1899 and was a Life member of The Medical Society of Virginia.

Dr. Albert G. Schnurman,

Of Roanoke, died August 21 after an illness of several months. He was forty-one years of age and graduated from the University of Virginia in 1938. He saw service in the U. S. Navy during World War II and, on his return, located in Roanoke. He was a member of The Medical Society of Virginia.

Dr. Edwin L. Hobson,

Retired physician, formerly of Richmond, died at his home in Goochland County on October 8. He was eighty-three years of age and a graduate of the former University College of Medicine, Richmond, in 1895. Surviving are two brothers and two sisters.

Dr. William Willcox Dunn,

Who died at his home June 19, 1952, after a prolonged illness, was born in Petersburg, Virginia, October 7, 1870. He attended Colonel Gordon McCabe's School from which he entered the University of Virginia for his pre-medical course. He graduated from the College of Physicians and Surgeons in New York in 1894. Following his graduation he did extensive Post-graduate work in Vienna and London and upon his return he interned at the Bellevue Hospital in New York City. He passed the Virginia State Board June 1, 1898, after which he located in Richmond where he engaged in the practice of medicine and surgery.

He is survived by his wife who was the daughter of Dr. Richard McIlwaine, president of Hampden-Sydney College and two sons, William Willcox Dunn, Jr., and Richard McIlwaine Dunn.

He was Associate Professor of Surgery at the University College of Medicine. He was a member of the Board for the Retreat for the Sick Hospital where he spent much of his time and where he was much beloved by the Staff and those he worked with over a period of many years. He was a member of the American Medical Association, The Medical Society of Virginia and the Richmond Academy of Medicine.

He was active in the Selective Service work during World War II.

PAUL W. HOWLE, M.D.
B. W. RAWLES, M.D.

Dr. Grantland S. Miller,

For twenty months a practicing physician in the Raven and Richlands section, died suddenly November 23. He was a native of Georgia, twenty-seven years of age, and graduated in medicine from the University of Georgia. He served a while in the U. S. Navy after World War II. His parents survive him.

Dr. Oswald F. Hedley,

A member of the U. S. Public Health Service, who made his home in Arlington, died in Washington, November 19. He graduated from the Medical College of Virginia in 1928 and had served many important positions in the Public Health Service. His wife, two daugheters and his mother survive him.

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